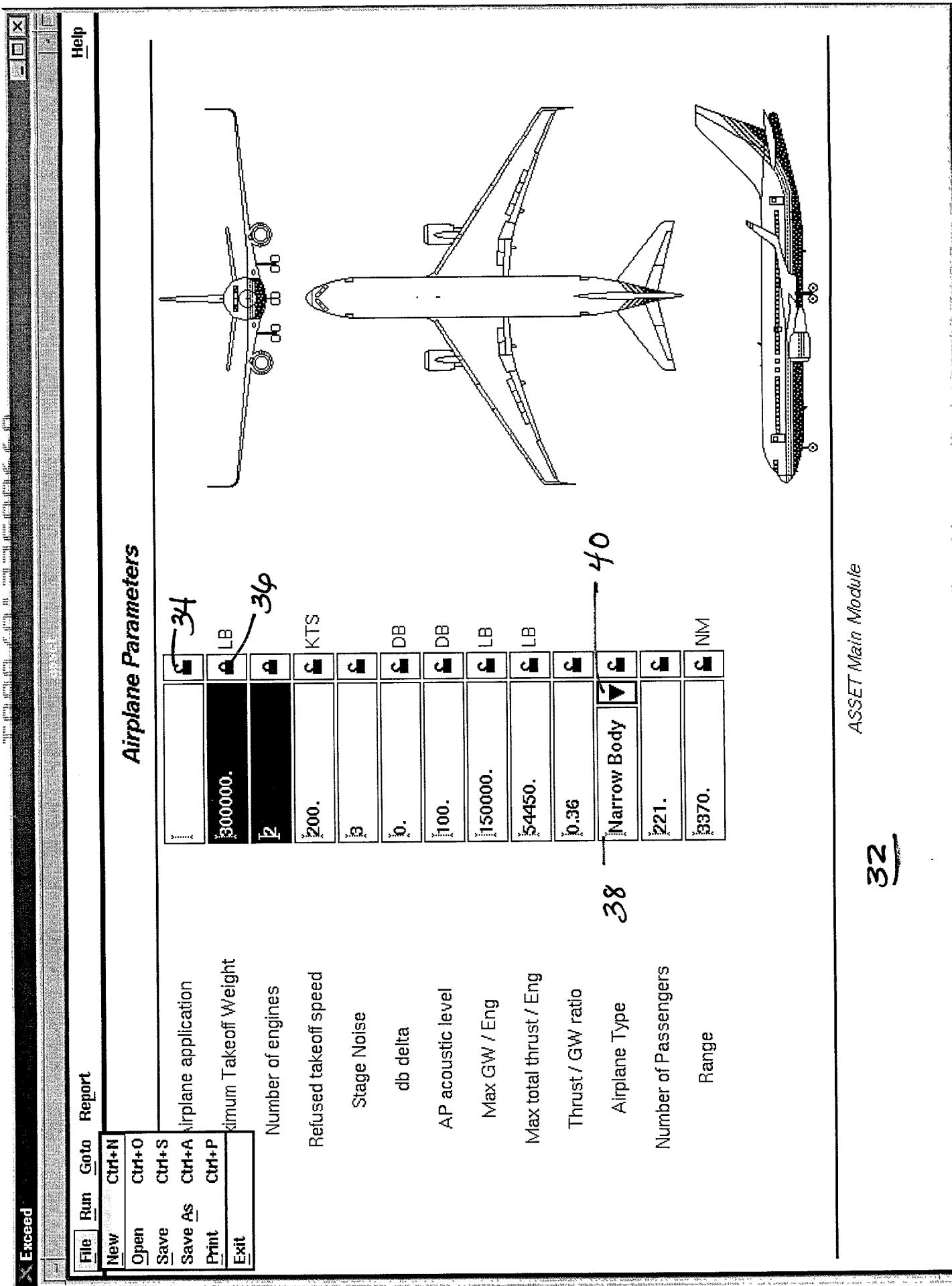


FIG. 1



**FIGURE 2**

**32**

*ASSET Main Module*

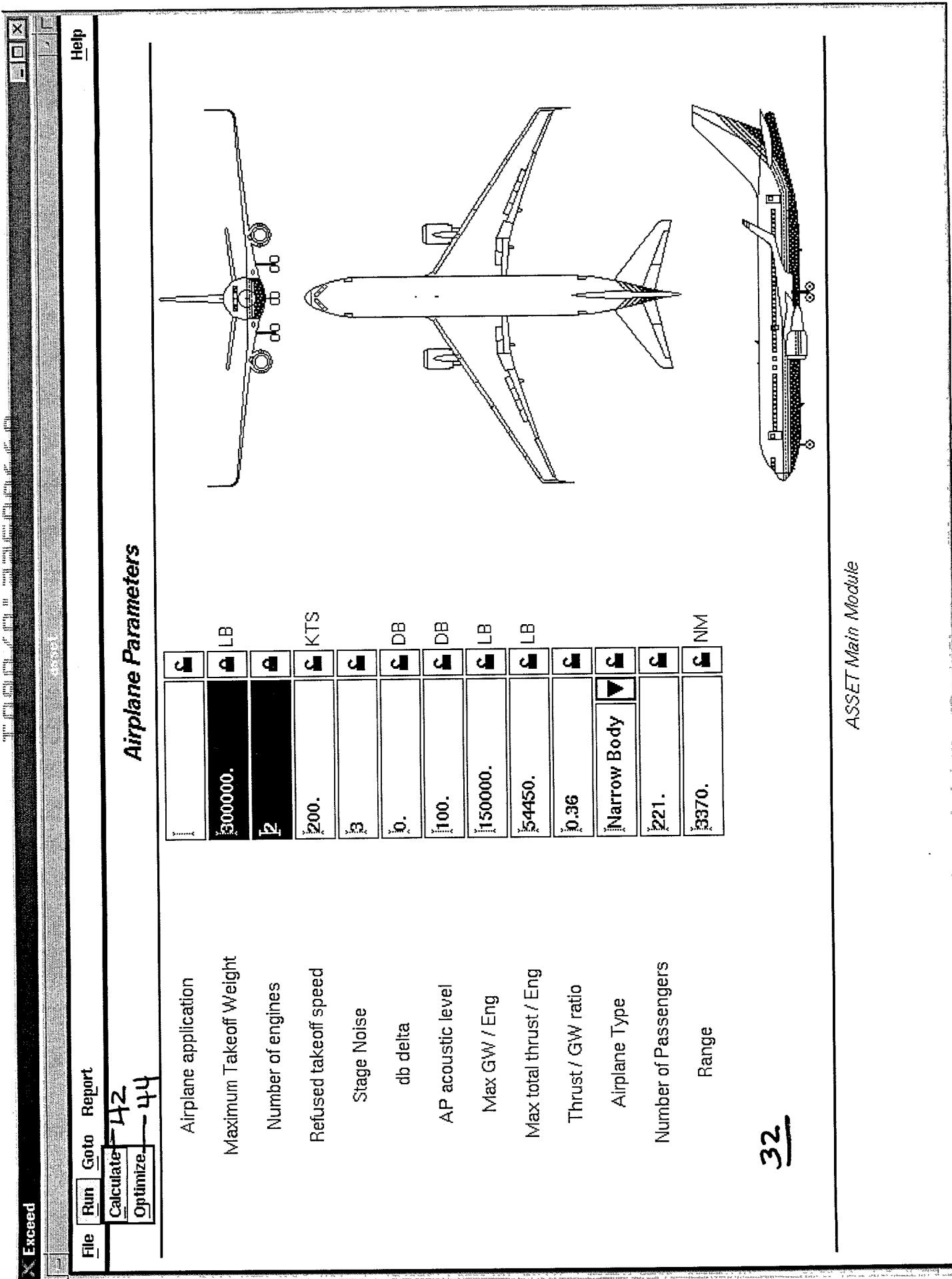


Figure 3

ASSEET Main Module

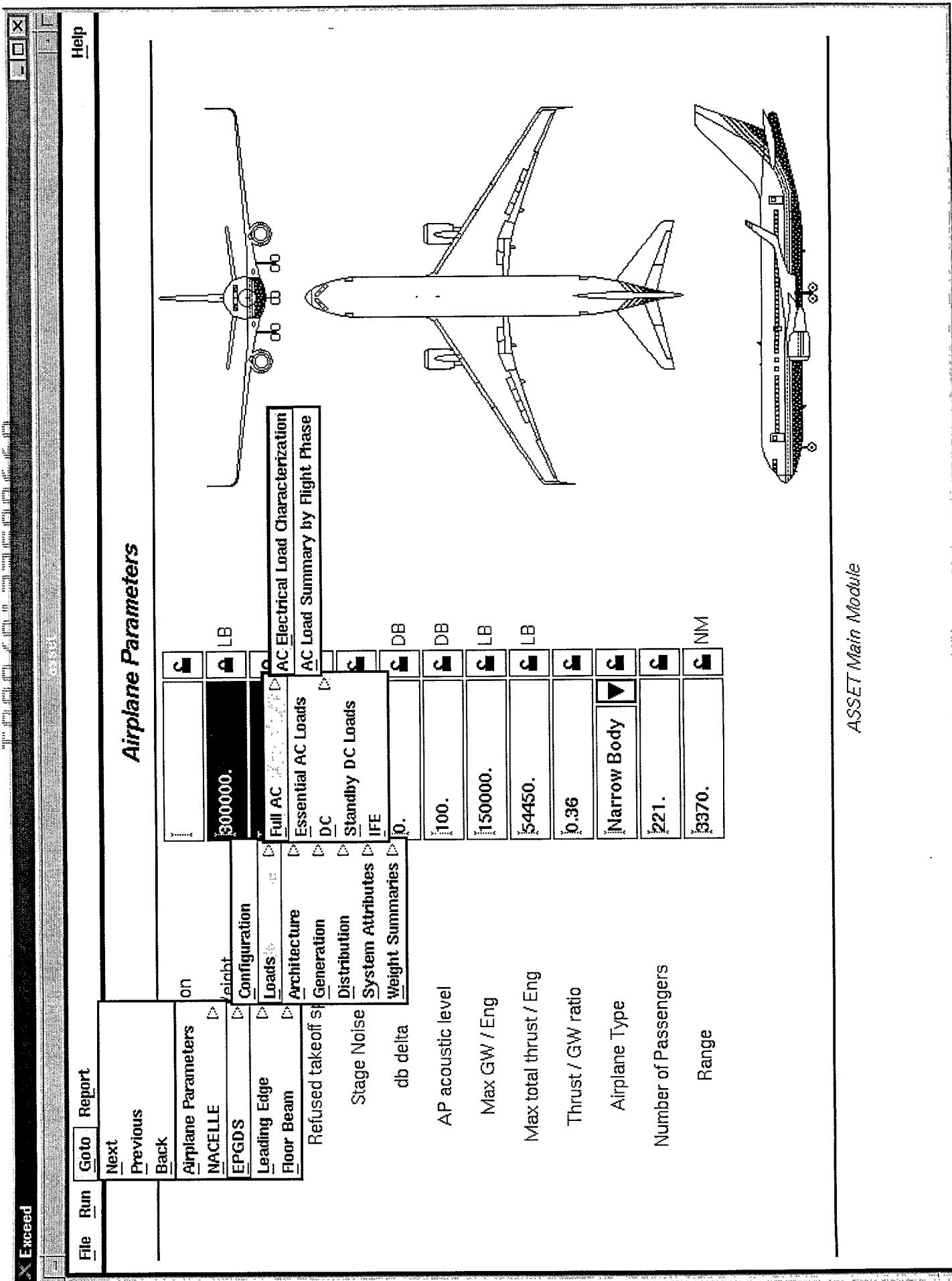


FIGURE 4

**Exceed**

**File Run Goto Report Help**

**Configuration**

**General:**

Fly-by-Wire	<input checked="" type="checkbox"/> 48a	TRUE	<input checked="" type="checkbox"/> 50	
Frequency Type	<input type="checkbox"/>	Constant	<input type="checkbox"/>	
Dual EE Bay	<input type="checkbox"/>	FALSE	<input type="checkbox"/>	
Double Voltage	<input type="checkbox"/>	FALSE	<input type="checkbox"/>	
RAT Generator?	<input checked="" type="checkbox"/>	TRUE	<input type="checkbox"/>	
Technology Era	<input type="checkbox"/>	Current	<input type="checkbox"/>	
Fuselage Length	154.17	FT	47.27	FT
Fuselage Diameter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Number of Passenger Entry/Exit Doors	4	<input type="checkbox"/>	2	<input type="checkbox"/>
Number of External Power Panels	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fan Diameter	32.96	IN	35.00	DEG
Sweep Angle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wing Span	1525.58	IN	538.95	IN
Horizontal Tail Span	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**ASSET EPGDS Method**

**FIGURE 5A**

**Exceed**

**File Run Goto Report Help**

**Configuration**

Body CL to O/B Engine CL	0.00	\$ IN
Side-of-Body to I/B Engine CL	122.43	\$ IN
Side-of-Body to O/B Engine CL	0.00	\$ IN
Dist. along LE I/B Eng. to Side-of-Body	263.32	\$ IN
Dist. along LE O/B Eng. to Side-of-Body	0.00	\$ IN
Dist. from Fwd. E/E Bay to Front Spar BS	0.00	\$ IN
Dist. from I/B Eng. to EE Bay	647.27	\$ IN
Dist. from O/B Eng. to EE Bay	0.00	\$ IN
Length of Main EE Bay	51.72	\$ IN
H - Lower Lobe Height	56.02	\$ IN
W1 Cabin Width	198.98	\$ IN
W2 Cargo Floor Width	107.78	\$ IN
Main E/E Bay Volume	257.2	\$ FT^3
Strut location	Fan	\$ ▾
Accessory location	Core	\$ ▾

ASSET EPGDS Method

Figure 5B

**Exceed**

**File Run Goto Report Help**

### AC Electrical Load Characterization

Number of Fans	6.0
Recirculation Fans	2.0
Number of E/E Cooling Vent Fans	2.0
Number of E/E Cooling Supply Fans	2.0
Number of TRUs	3.0
Number of ACMPS	2.0
Number of Window/Windshield Heaters	6.0
Number of Lavatories	3.0
<b>52</b>	

Number of Wide Body Pumps	0.0
Number of Wide Body Boost Pumps	0.0
Number of Wide Body Override Pumps	0.0
Number of Wide Body Jettison Pumps	0.0
Number of Narrow Body Pumps	6.0
Number of Narrow Body Boost Pumps	6.0
Number of Narrow Body Override Pumps	0.0
Number of Narrow Body Jettison Pumps	0.0

**ASSET EPGDS Method**

Figure 6

**AC Load Summary by Flight Phase**

ATA Subsystems	Passenger Loading			Engine Start			Taxi Out		
	(kVA)	(PF)	(kVA)	(PF)	(kVA)	(PF)	(kVA)	(PF)	(kVA)
21 Air Conditioning	13.72	0.82	13.72	0.82	0.82	0.82	11.32	0.90	1.00
22 Auto Flight	0.68	0.90	0.68	0.90	0.90	0.90	0.68	0.90	0.90
23 Communications	0.64	1.00	0.95	1.00	1.00	1.00	2.42	1.00	1.00
24 Electrical Power	3.38	0.95	3.39	0.95	0.95	0.95	3.57	0.95	0.95
25 Equipment/Furnishings	25.10	1.00	23.24	1.00	1.00	1.00	38.93	1.00	1.00
26 Fire Protection	0.20	1.00	0.20	1.00	1.00	1.00	0.20	1.00	1.00
27 Flight Control	0.07	1.00	0.07	1.00	1.00	1.00	0.07	1.00	1.00
28 Fuel	0.00	1.00	0.08	1.00	0.83	0.83	0.08	0.83	0.83
29 Hydraulic Power System	19.28	0.75	19.28	0.75	0.75	0.75	19.28	0.75	0.75
30 Ice/Rain Protection	4.43	1.00	5.29	1.00	1.00	1.00	5.29	1.00	1.00
31 Instruments	0.30	1.00	0.30	1.00	1.00	1.00	0.30	1.00	1.00
32 Landing Gear	0.12	1.00	0.12	1.00	1.00	1.00	0.12	1.00	1.00
Maximum Flight Phase Load	116.88	0.96	116.88	0.96	0.96	0.96	116.88	0.96	0.96

ASSET EPGDS Method

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Figure 7A

T O 9 0 &lt; D " 2 2 2 0 0 6 5 0

**AC Load Summary by Flight Phase**

ATA Subsystems	Passenger Loading			Engine Start			Taxi Out		
	(kVA)	(PF)	(kVA)	(PF)	(kVA)	(PF)	(kVA)	(PF)	(kVA)
32 Landing Gear	<> 0.12	█ <>	1.00	█ <>	0.12	█ <>	1.00	█ <>	0.12
33 Lights	<> 10.68	█ <>	1.00	█ <>	9.71	█ <>	1.00	█ <>	9.32
34 Navigation	<> 0.89	█ <>	0.85	█ <>	0.89	█ <>	0.85	█ <>	0.94
35 Oxygen	<> 0.00	█ <>	1.00	█ <>	0.00	█ <>	1.00	█ <>	0.00
36 Pneumatics	<> 0.00	█ <>	1.00	█ <>	0.23	█ <>	1.00	█ <>	0.00
38 Water/Waste	<> 6.36	█ <>	0.77	█ <>	1.40	█ <>	0.83	█ <>	1.40
46 Electronic Library	<> 0.00	█ <>	1.00	█ <>	0.00	█ <>	0.00	█ <>	0.00
49 Airplane Auxiliary Power	<> 0.00	█ <>	1.00	█ <>	0.00	█ <>	1.00	█ <>	0.00
52 Doors	<> 0.00	█ <>	1.00	█ <>	0.00	█ <>	1.00	█ <>	0.00
57 Folding Wing	<> 0.00	█ <>	0.00	█ <>	0.00	█ <>	0.00	█ <>	0.00
73 Engine Fuel Control	<> 0.00	█ <>	1.00	█ <>	0.70	█ <>	0.74	█ <>	0.70
74 Ignition	<> 0.00	█ <>	1.00	█ <>	0.30	█ <>	0.33	█ <>	0.00
Maximum Flight Phase Load	<> 116.88	█ KVA <>	0.96	█ PF					

ASSET EPGDS Method

FIGURE 7B

**AC Load Summary by Flight Phase**

The screenshot shows a software window titled "AC Load Summary by Flight Phase". The menu bar includes "File", "Run", "Goto", "Report", and "Help". A toolbar on the left has icons for "Exceed", "Run", "Goto", and "Report". The main area contains a table with flight phases and subsystems.

**Flight Phases:**

- Take-off & Climb
- Cruise
- Descent & Land

**ASAT Subsystems:**

- 32 Landing Gear
- 33 Lights
- 34 Navigation
- 35 Oxygen
- 36 Pneumatics
- 38 Water/Waste
- 46 Electronic Library
- 49 Airplane Auxiliary Power
- 52 Doors
- 57 Folding Wing
- 73 Engine Fuel Control
- 74 Landing Gear

**Load Summary:**

ASAT Subsystems	(%VA)	(PF)	(%VA)	(PF)	(%VA)	(PF)	(%VA)	(PF)
32 Landing Gear	0.12	1.00	0.12	1.00	0.23	1.00	1.00	1.00
33 Lights	10.97	1.00	7.73	1.00	11.51	1.00	1.00	1.00
34 Navigation	1.17	1.00	1.17	1.00	1.17	1.00	0.88	1.00
35 Oxygen	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00
36 Pneumatics	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00
38 Water/Waste	0.94	1.00	0.98	1.14	0.89	1.12	0.94	0.94
46 Electronic Library	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
49 Airplane Auxiliary Power	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00
52 Doors	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00
57 Folding Wing	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00
73 Engine Fuel Control	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00
74 Landing Gear	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00
<b>Maximum Flight Phase Load</b>	<b>116.88</b>	<b>1.00</b>	<b>96</b>	<b>1.00</b>	<b>PF</b>	<b>1.00</b>	<b>1.00</b>	<b>1.00</b>

**ASSET EPGDS Method**

FIGURE 7C

**AC Load Summary by Flight Phase**

---

ATA Subsystems	---- Take-off & Climb ----			---- Cruise ----			---- Descent & Land ----		
	(kVA)	(PF)	(kVA)	(PF)	(kVA)	(PF)	(kVA)	(PF)	
57 Forward wing	<> 0.00	↔ 1.00	<> 10.00	↔ 1.00	<> 10.00	↔ 1.00	<> 3.00	↔ 1.00	<> 1.00
73 Engine Fuel Control	<> 0.00	↔ 1.00	<> 0.00	↔ 1.00	<> 0.00	↔ 1.00	<> 0.00	↔ 1.00	<> 1.00
74 Ignition	<> 0.00	↔ 1.00	<> 0.00	↔ 1.00	<> 0.00	↔ 1.00	<> 0.00	↔ 1.00	<> 1.00
75 Air	<> 0.00	↔ 1.00	<> 0.00	↔ 1.00	<> 0.00	↔ 1.00	<> 0.00	↔ 1.00	<> 1.00
76 Engine Controls	<> 0.00	↔ 1.00	<> 0.00	↔ 1.00	<> 0.02	↔ 1.00	<> 0.00	↔ 1.00	<> 1.00
77 Engine Indicating	<> 0.02	↔ 1.00	<> 0.00	↔ 1.00	<> 0.00	↔ 1.00	<> 0.02	↔ 1.00	<> 1.00
78 Exhaust	<> 0.00	↔ 1.00	<> 0.00	↔ 1.00	<> 0.00	↔ 1.00	<> 0.00	↔ 1.00	<> 1.00
79 Oil	<> 0.00	↔ 1.00	<> 0.00	↔ 1.00	<> 0.00	↔ 1.00	<> 0.00	↔ 1.00	<> 1.00
80 Starting	<> 0.00	↔ 1.00	<> 0.00	↔ 1.00	<> 0.00	↔ 1.00	<> 0.00	↔ 1.00	<> 1.00
Flight Phase Subtotals	<> 101.63	↔ 0.96	<> 100.16	↔ 0.96	<> 65.71	↔ 0.93			
Error/Growth Factor (15%)	<> 15.24	↔ 0.96	<> 15.02	↔ 0.96	<> 9.86	↔ 0.93			
Flight Phase Totals	<> 116.88	↔ 0.96	<> 115.19	↔ 0.96	<> 75.57	↔ 0.93			
Maximum Flight Phase Load	<> 116.88	↔ 0.96							

---

ASSET EPGDS Method

Figure 7d

Essential AC Loads			
	Quantity	Load per Unit	Totals
Number of Upper Recirculating Fans	2.0	1.28 @<> KVA	Total Fan Load 15.38 KVA
Number of Lower Recirculating Fans	0.0	1.98 @<> KVA	
Number of E/E Cooling Supply Fans	2.0	3.20 @<> KVA	
Number of E/E Cooling Vent Fans	2.0	3.20 @<> KVA	
Number of Hydraulic AC/MP Pumps	2.0	6.41 @<> KVA	Total Pump Load 23.30 KVA
Number of Fuel Boost Pumps	6.0	1.75 @<> KVA	
Number of Fuel Override Pumps	0.0	4.66 @<> KVA	
			Passenger Load
Baseline Flight & Electronics, Ice & Rain	6.75	6.75 @<> KVA	Baseline Flight & Electronics Total Load 13.10 KVA
Baseline Flight & Electronics, Electronics	6.35	6.35 @<> KVA	
			Subtotal of Essential Loads 58.86 KVA
			General Feeder Loss 4.12 KVA
			Total of Essential Loads 52.98 KVA

FIGURE 8

58

ASSET ERGDS Method

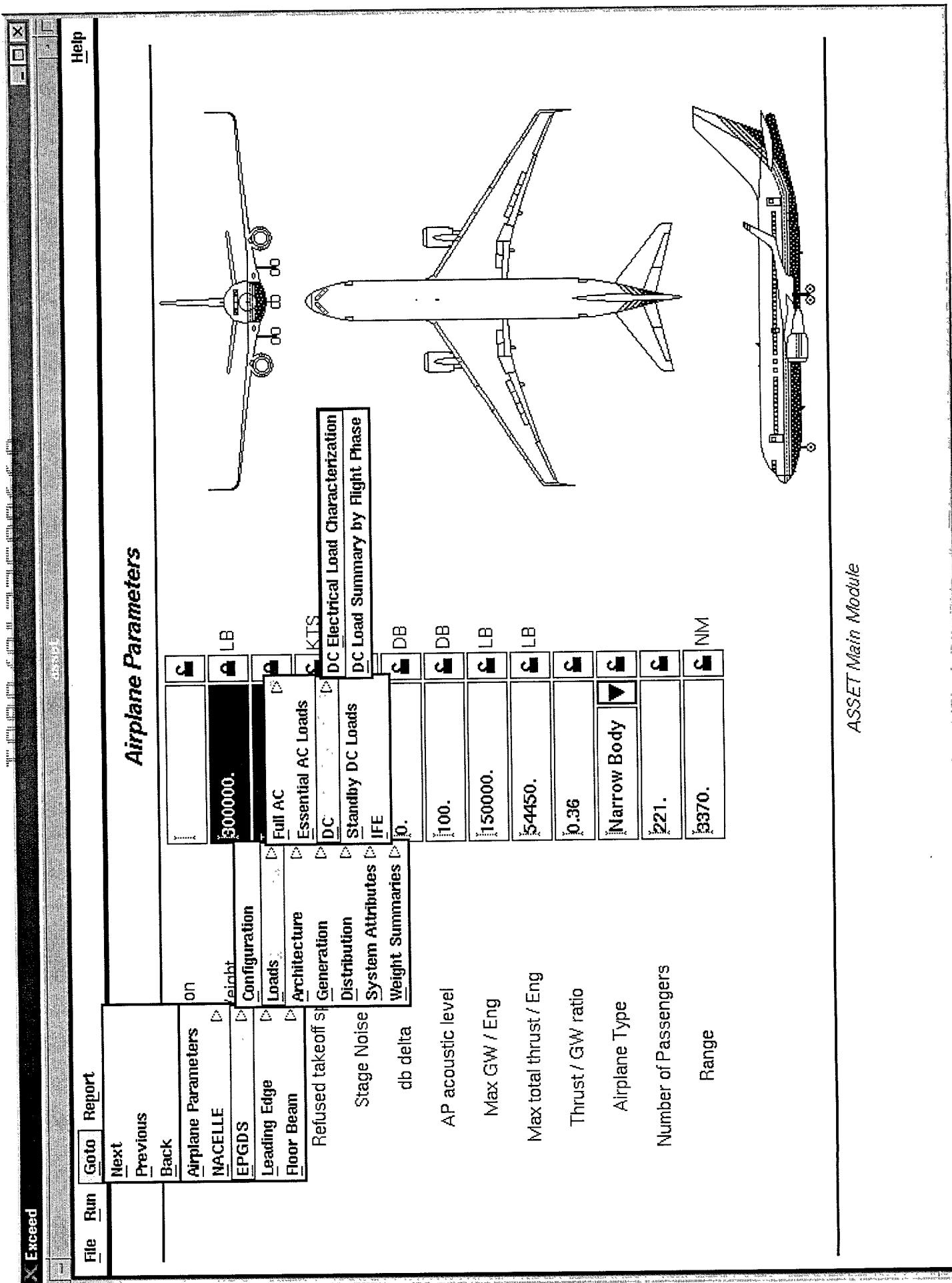


Figure 9

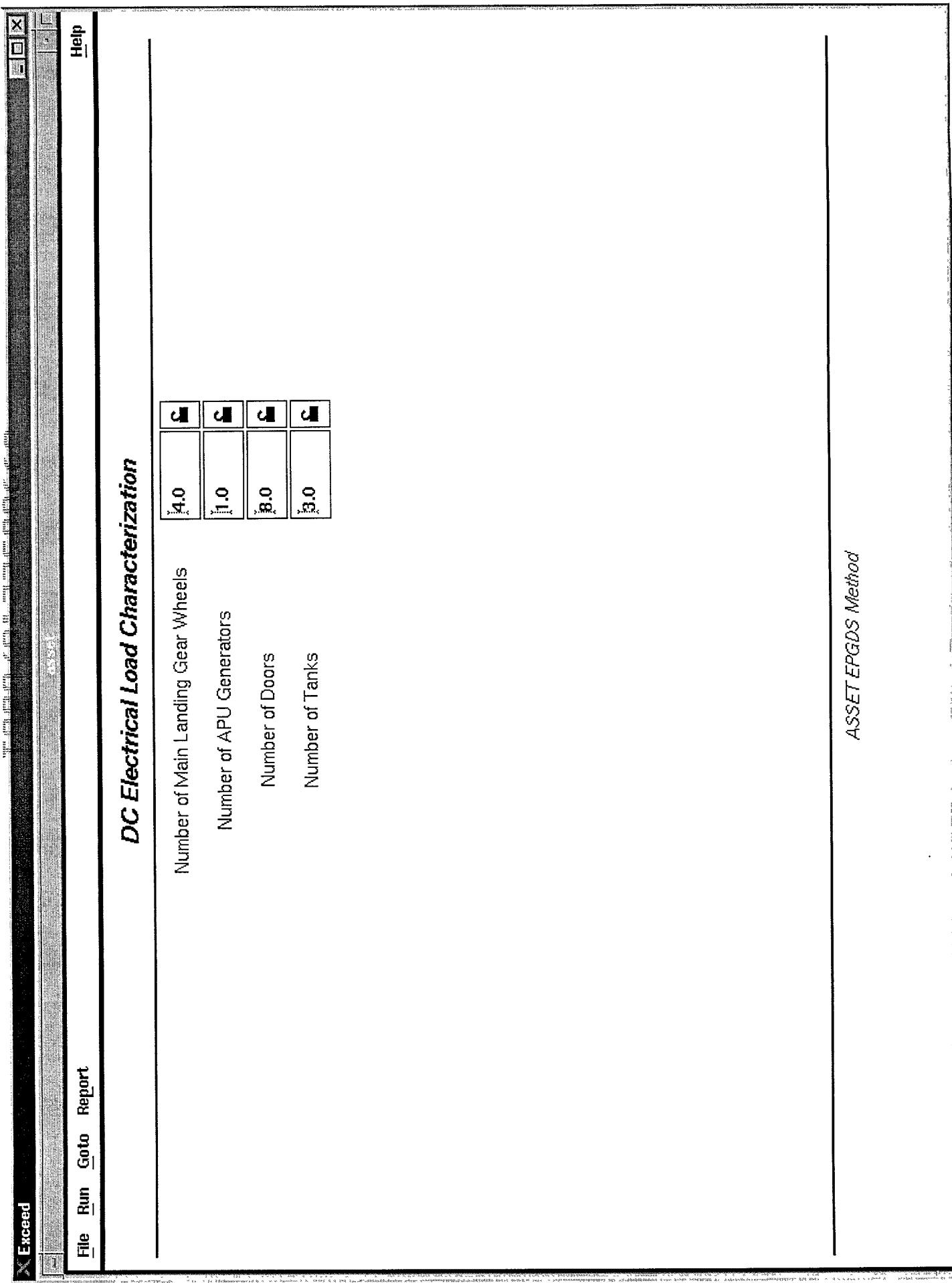


Figure 10

**DC Load Summary by Flight Phase**

ATA Subsystems	Pass		Engine		Taxi-Out		& Climb		Cruise		Take-Off		Descent	
	Loading	(Amps)	Start	(Amps)	Taxi-Out	(Amps)	& Climb	(Amps)	Cruise	(Amps)	Take-Off	(Amps)	Descent	(Amps)
21 Air Conditioning	<>	13.40	<>	14.60	<>	15.01	<>	15.14	<>	15.14	<>	15.14	<>	15.14
22 Auto Flight	<>	9.83	<>	9.83	<>	9.83	<>	10.42	<>	10.75	<>	13.60	<>	13.60
23 Communications (IFE, AVOD)	<>	6.74	<>	6.56	<>	7.69	<>	6.90	<>	7.13	<>	6.90	<>	6.90
24 Electrical Power	<>	3.36	<>	2.27	<>	2.27	<>	2.27	<>	2.27	<>	2.27	<>	2.27
25 Equipment/Furnishings	<>	18.22	<>	18.04	<>	18.04	<>	18.04	<>	18.04	<>	18.04	<>	18.04
26 Fire Protection	<>	0.54	<>	0.54	<>	0.54	<>	0.54	<>	0.54	<>	0.54	<>	0.54
27 Flight Control	<>	0.07	<>	0.07	<>	0.07	<>	0.07	<>	0.07	<>	0.07	<>	0.07
28 Fuel	<>	6.51	<>	1.21	<>	1.21	<>	1.21	<>	1.21	<>	1.21	<>	1.21
29 Hydraulic Power System	<>	0.80	<>	0.80	<>	0.80	<>	0.80	<>	0.80	<>	0.80	<>	0.80
30 Ice/Rain Protection	<>	3.20	<>	5.30	<>	5.30	<>	12.42	<>	12.42	<>	5.40	<>	12.42
31 Instruments	<>	36.81	<>	36.70	<>	36.70	<>	36.70	<>	36.70	<>	36.70	<>	36.70
Maximum Flight Phase Direct Current Load		139.90	<>	139.90	<>	139.90	<>	139.90	<>	139.90	<>	139.90	<>	139.90
ASSET EPGDS Method														

Figure 11A

**DC Load Summary by Flight Phase**

---

ATA Subsystems	Pass	Engine	Take-Off		Descent	
	Loading (Amps)	Start (Amps)	Taxi-Out (Amps)	& Climb (Amps)	Cruise (Amps)	& Land (Amps)
31 Instruments	<> 36.81	<> 36.70	<> 36.70	<> 36.70	<> 36.70	<> 36.70
32 Landing Gear	<> 3.69	<> 3.69	<> 3.67	<> 3.59	<> 3.59	<> 4.07
33 Lights	<> 15.84	<> 15.77	<> 16.38	<> 19.47	<> 17.07	<> 16.05
34 Navigation	<> 1.99	<> 1.95	<> 2.45	<> 2.45	<> 2.45	<> 2.45
35 Oxygen	<> 0.00	<> 0.00	<> 0.00	<> 0.00	<> 0.00	<> 0.00
36 Pneumatics	<> 4.07	<> 4.07	<> 4.07	<> 4.07	<> 4.07	<> 4.07
38 Water/Waste	<> 2.07	<> 1.53	<> 1.53	<> 2.07	<> 1.65	<> 2.07
46 Electronic Library	<> 0.00	<> 0.00	<> 0.00	<> 0.00	<> 0.00	<> 0.00
49 Airplane Auxiliary Power	<> 1.20	<> 1.20	<> 1.20	<> 1.20	<> 0.00	<> 0.00
52 Doors	<> 1.00	<> 1.50	<> 1.50	<> 1.50	<> 1.50	<> 1.50
57 Folding Wing	<> 0.00	<> 0.00	<> 0.00	<> 0.00	<> 0.00	<> 0.00
Maximum Flight Phase Direct Current Load		139.90	&	AMPS		

ASSET EPGDS Method

FIGURE 11B

**Exceed**

**File Run Goto Report Help**

**DC Load Summary by Flight Phase**

ATA Subsystems	Pass	Loading (Amps)	Engine (Amps)	Start (Amps)	Taxi-Out (Amps)	& Climb (Amps)	Cruise (Amps)	Take-Off (Amps)	Descent & Land (Amps)	
									Descent	& Land
52 Doors	<> 1.00	<> 1.50	<> 1.50	<> 1.50	<> 1.50	<> 1.50	<> 1.50	<> 1.50	<> 1.50	<> 1.50
57 Folding Wing	<> 0.00	<> 0.00	<> 0.00	<> 0.00	<> 0.00	<> 0.00	<> 0.00	<> 0.00	<> 0.00	<> 0.00
73 Engine Fuel Control	<> 0.00	<> 0.07	<> 0.07	<> 0.00	<> 0.37	<> 0.37	<> 0.37	<> 0.37	<> 0.37	<> 0.37
74 Ignition	<> 0.00	<> 0.00	<> 0.00	<> 0.00	<> 0.00	<> 0.00	<> 0.00	<> 0.00	<> 0.00	<> 0.00
75 Air	<> 0.00	<> 0.00	<> 0.00	<> 0.00	<> 0.00	<> 0.00	<> 0.00	<> 0.00	<> 0.00	<> 0.00
76 Engine Controls	<> 1.12	<> 1.12	<> 1.12	<> 0.65	<> 0.65	<> 0.65	<> 0.65	<> 0.65	<> 0.65	<> 0.65
77 Engine Indicating	<> 0.00	<> 0.00	<> 0.00	<> 0.00	<> 0.00	<> 0.00	<> 0.00	<> 0.00	<> 0.00	<> 0.00
78 Exhaust	<> 0.00	<> 0.00	<> 0.00	<> 0.00	<> 0.00	<> 0.00	<> 0.00	<> 0.00	<> 0.00	<> 0.00
79 Oil	<> 0.00	<> 0.00	<> 0.00	<> 0.00	<> 0.00	<> 0.00	<> 0.00	<> 0.00	<> 0.00	<> 0.00
80 Starting	<> 0.00	<> 0.00	<> 0.00	<> 3.20	<> 0.00	<> 0.00	<> 0.00	<> 0.00	<> 0.00	<> 0.00
Flight Phase Totals	<> 130.46	<> 130.02	<> 130.02	<> 136.40	<> 139.90	<> 139.90	<> 139.90	<> 139.41	<> 139.53	<> 139.53
Maximum Flight Phase Direct Current Load									139.90	AMPS

ASSET EPGDS Method

FIGURE 11C

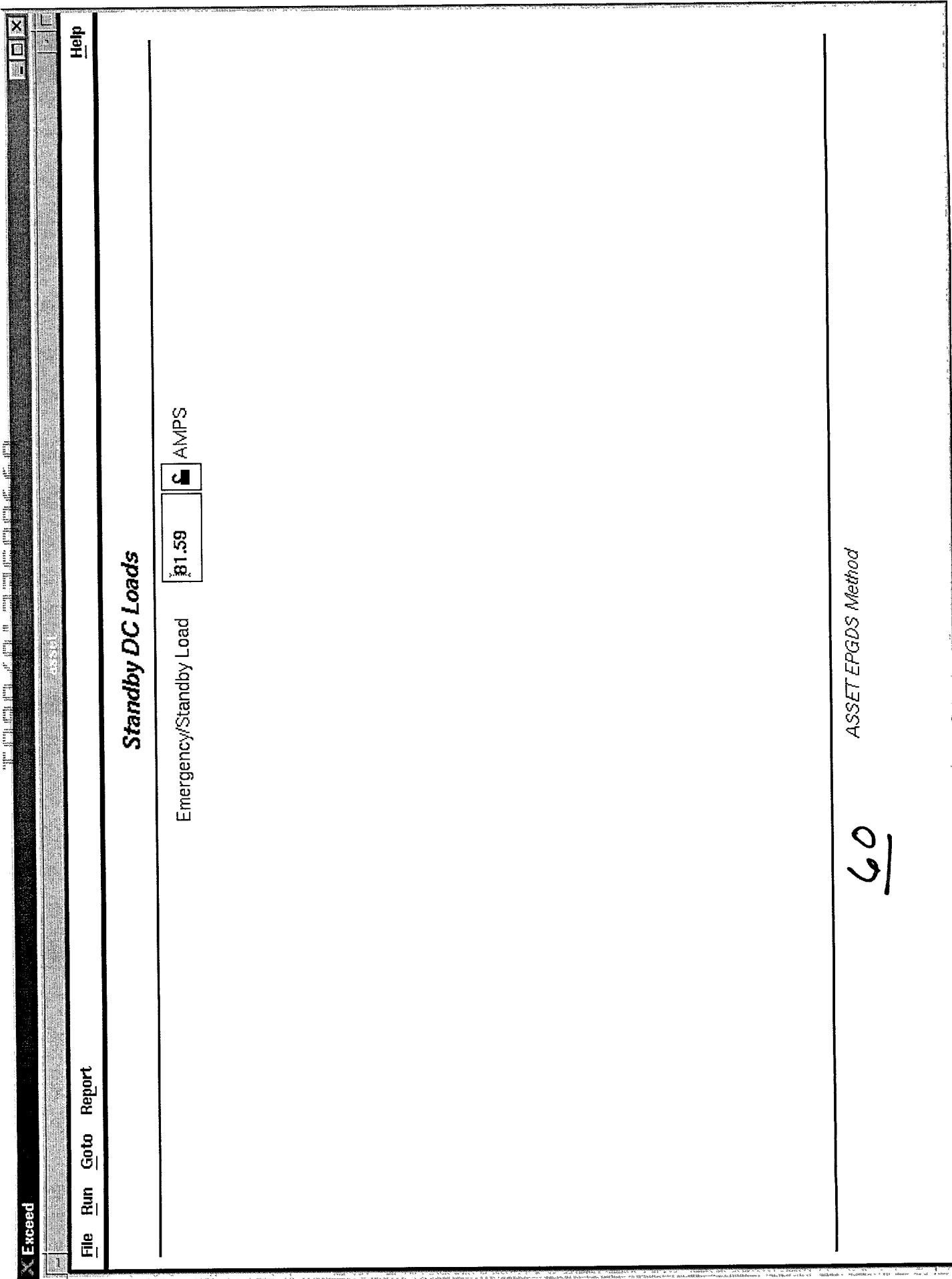


Figure 12

60

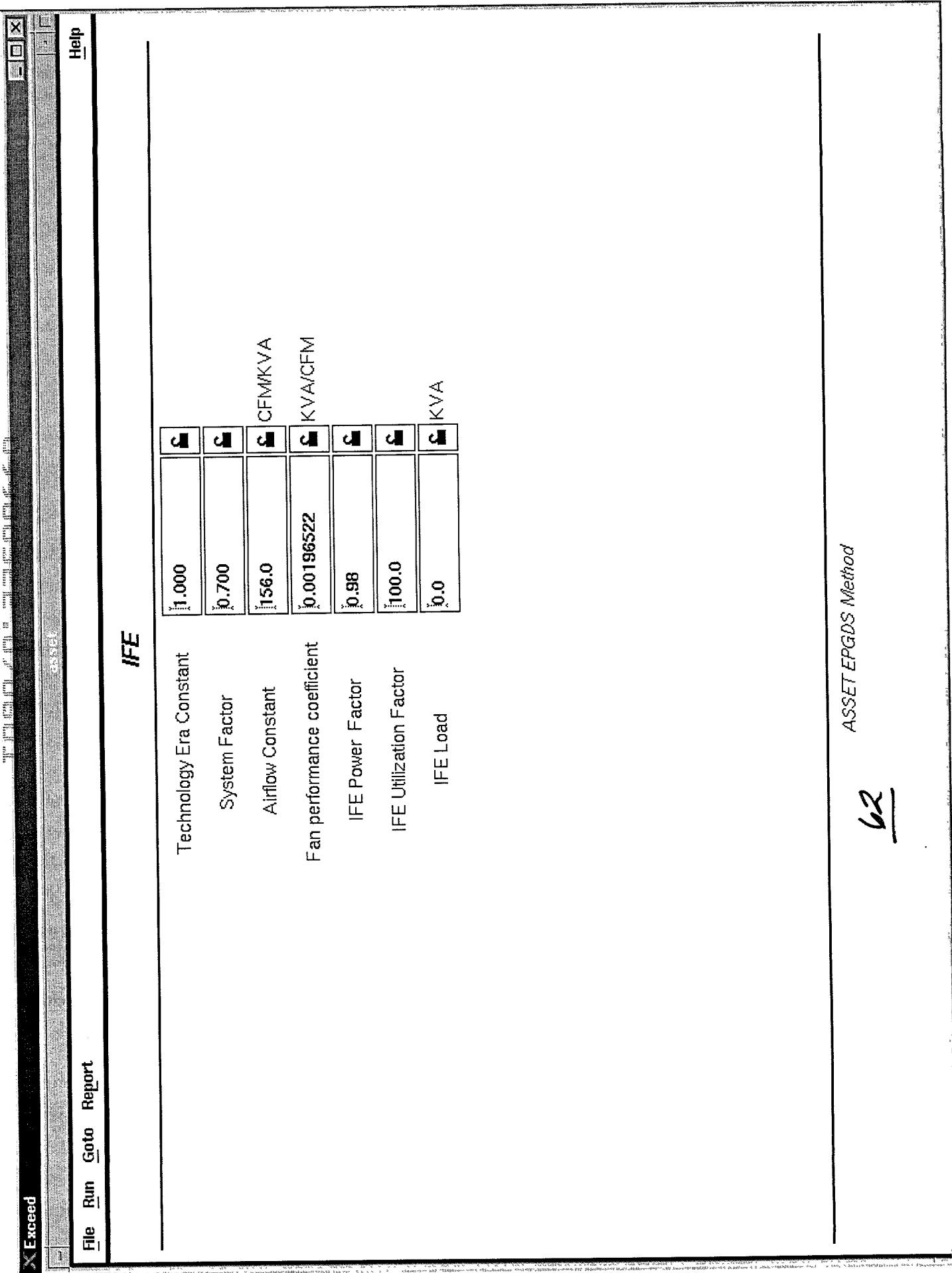


FIGURE 13

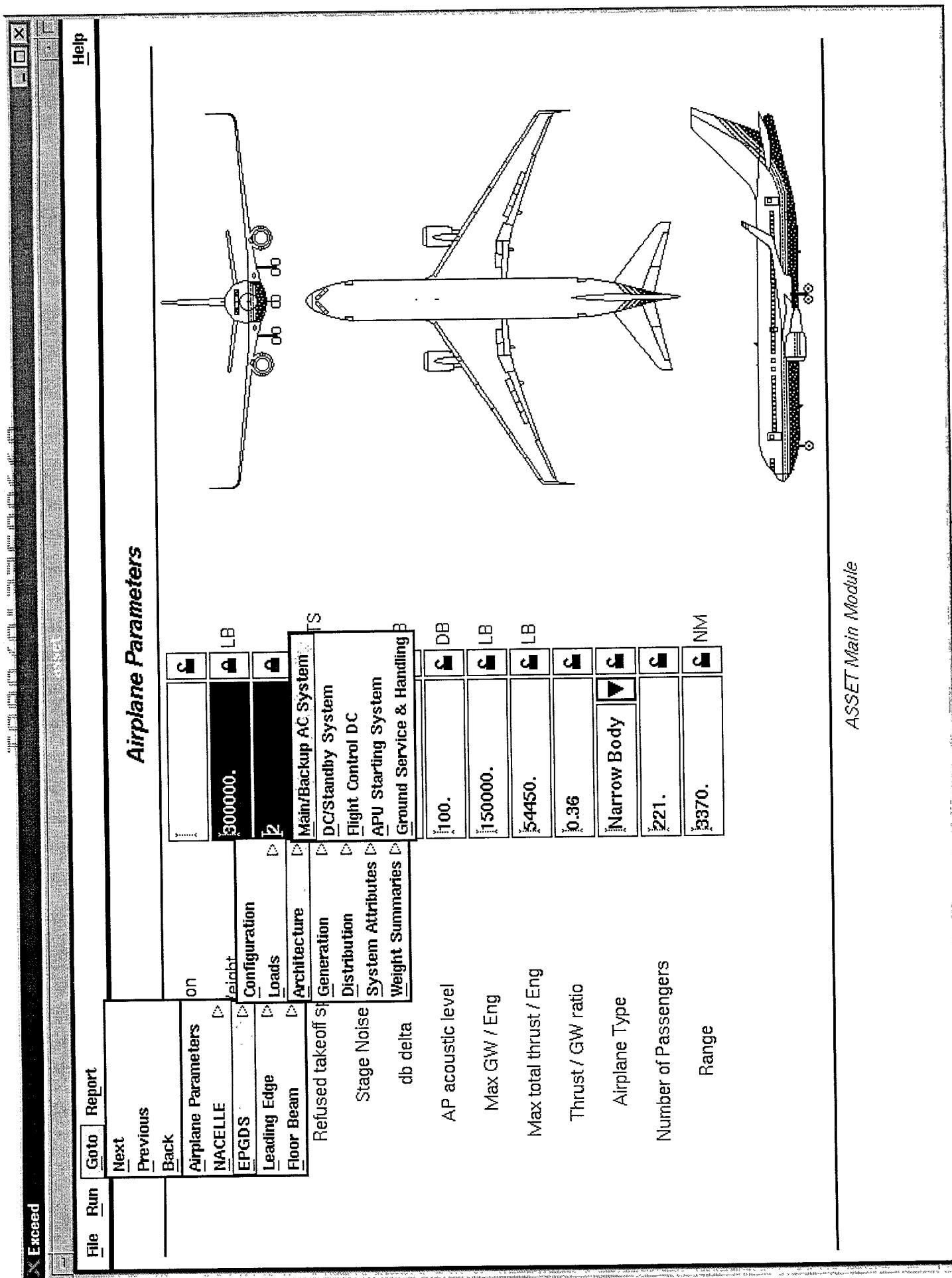


Figure 14

ASSET Main Module

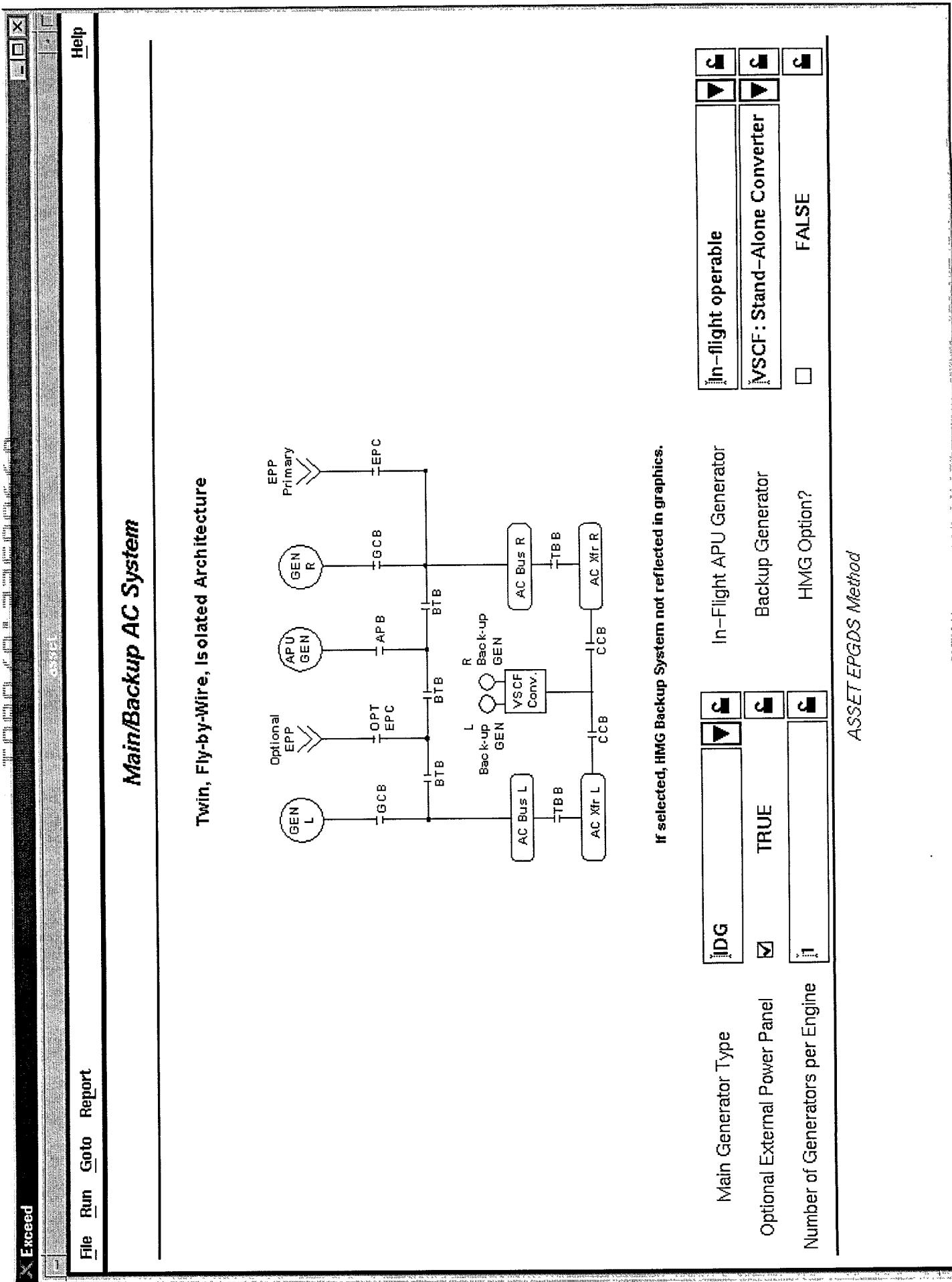
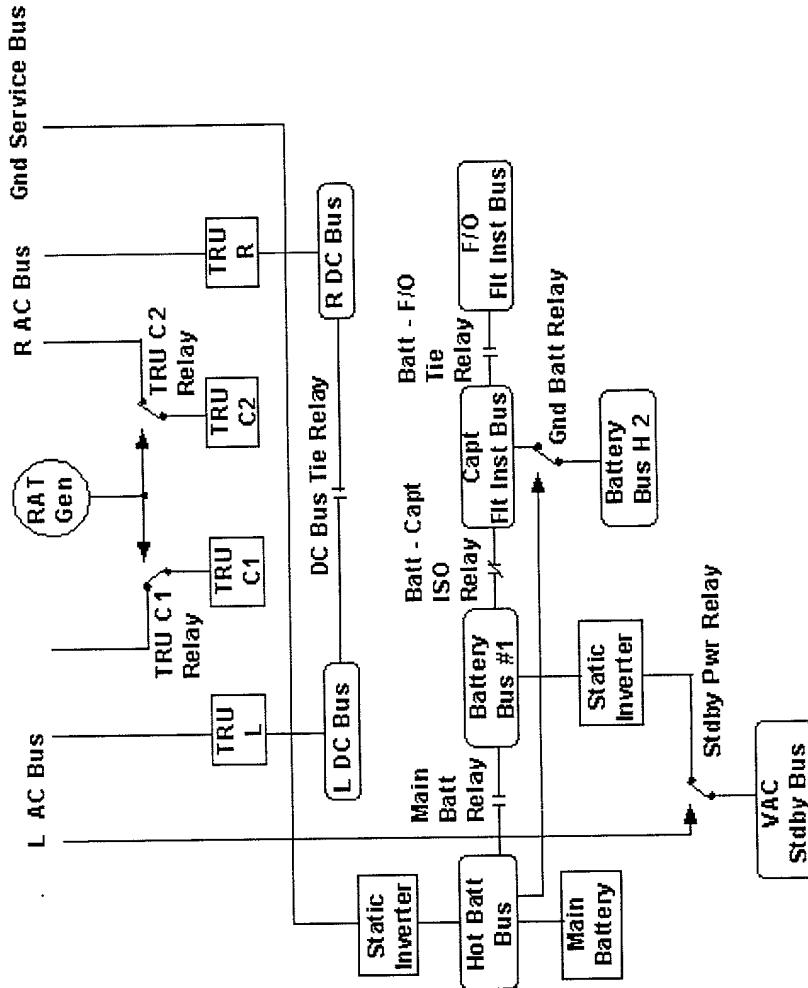
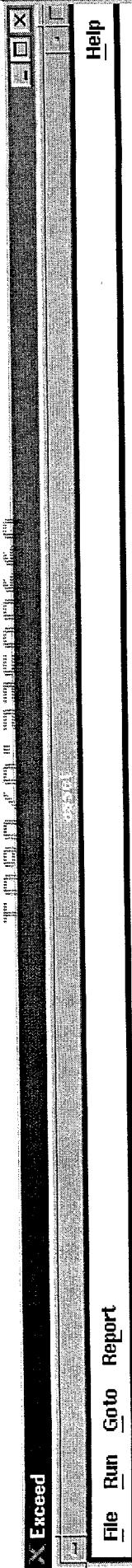


Figure 15



ASSET EPGDS Method

Figure 16

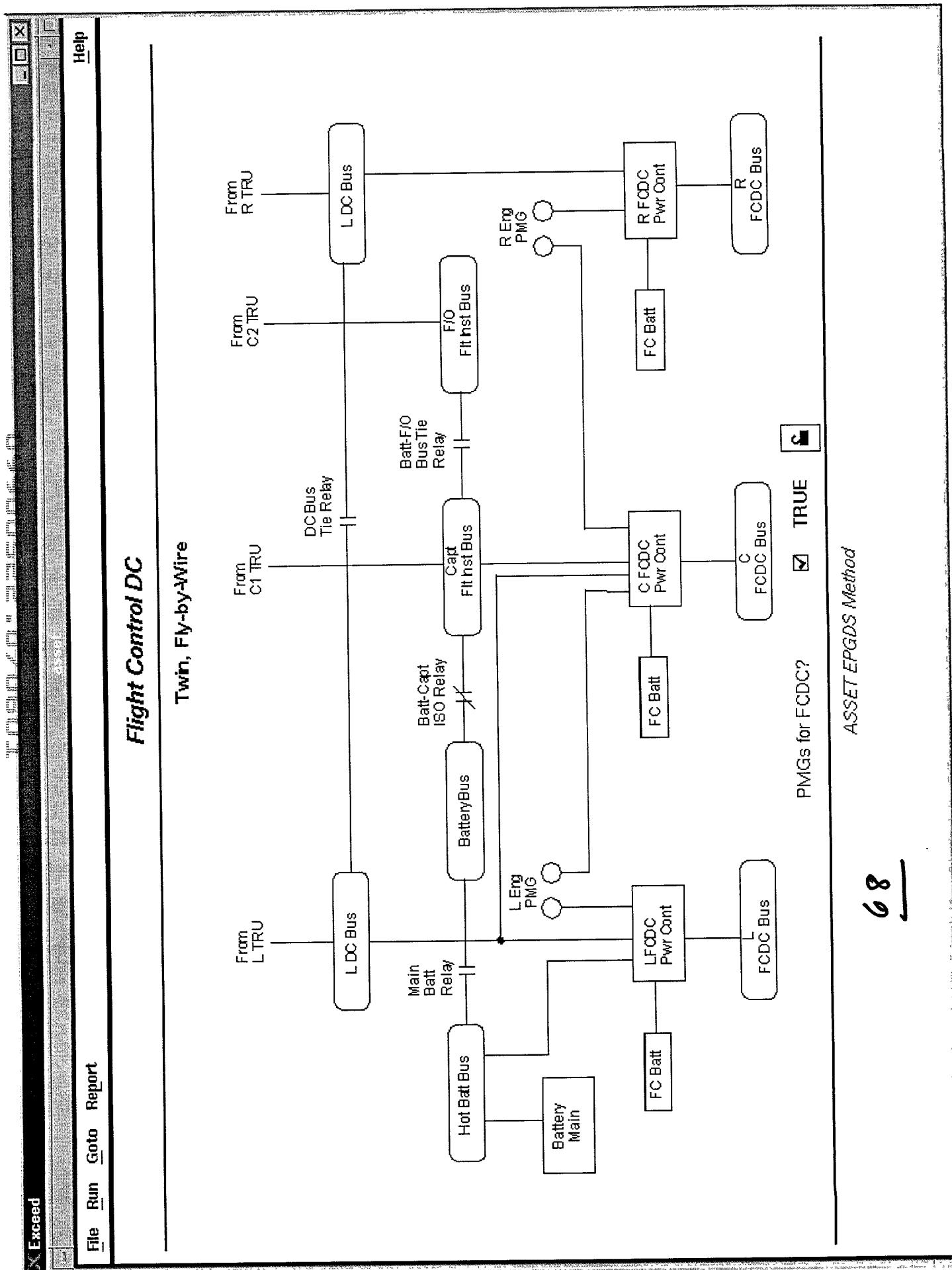


FIGURE 17



APU Starting System

ASSET EPGDS Method

*Figure 18*

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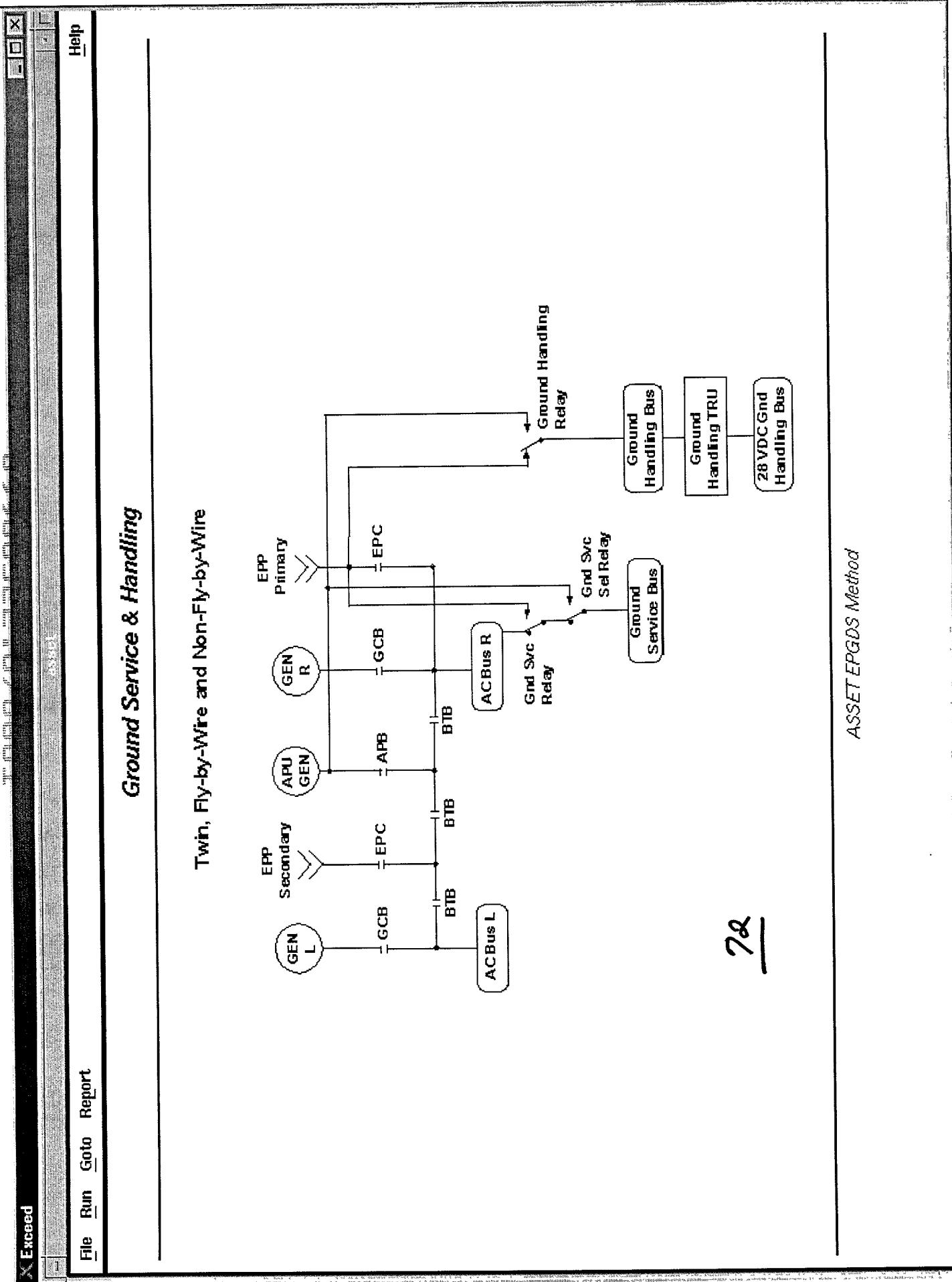


Figure 19

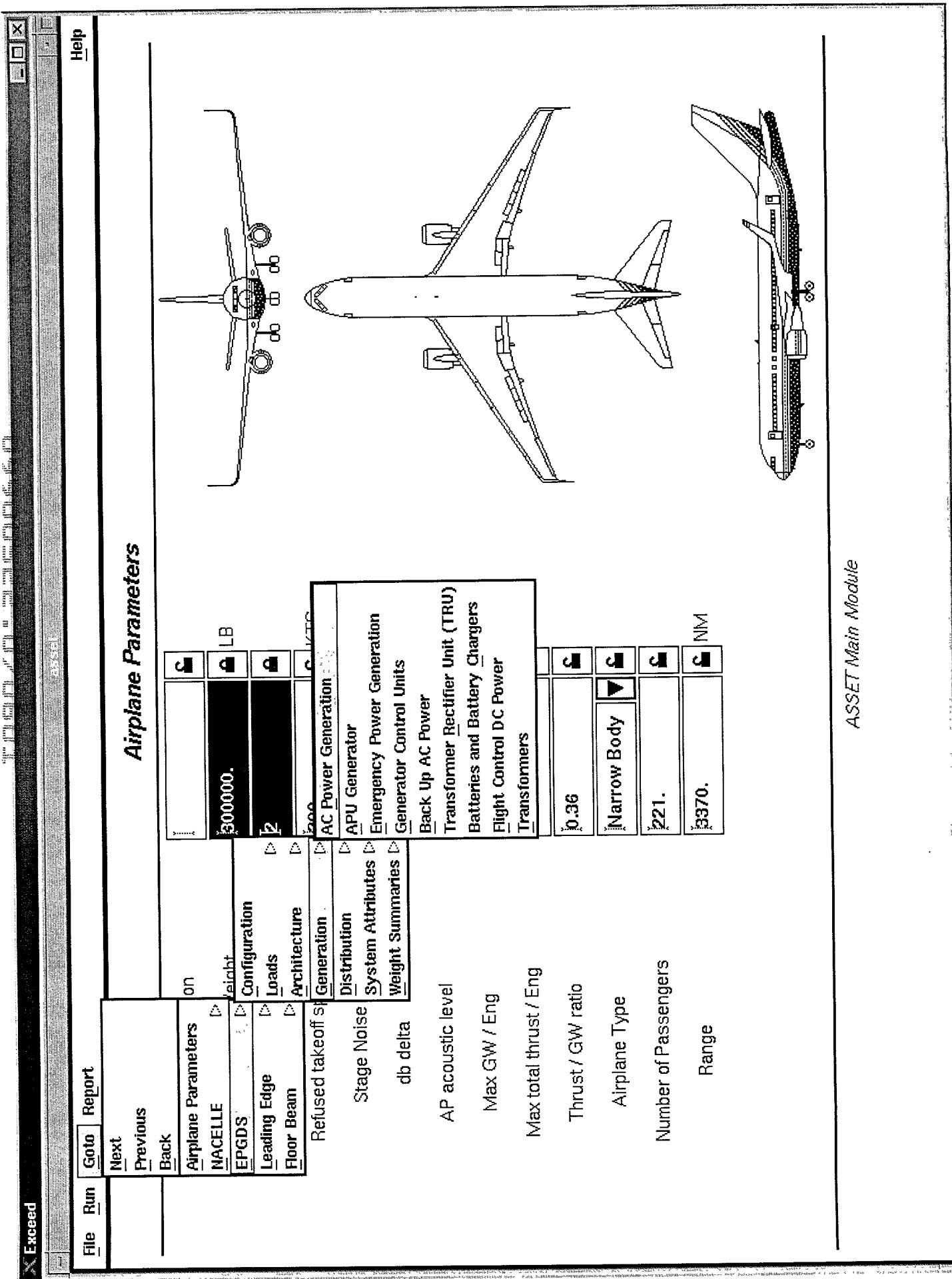


Figure 20

ASSET Main Module

**Exceed**

**File Run Goto Report Help**

### **AC Power Generation**

Generator Input Speed	24000.	RPM	IDG
Method of Cooling	Oil	KVA	LB
Generator Capacity	90.0	KVA	LB
Main AC Power Generator Weight	110.5	KVA	LB
VSCF Converter Config.	None	KVA	LB
Maximum Converter Load	0.0	KVA	LB
Main Converter Unit Weight	0.0	KVA	LB
ATA Chapter	Section Title		
	Motor Controller Load KVA		
	Motor Controller Weight LB		
	0.0	0.0	0.0
	0.0	0.0	0.0
	0.0	0.0	0.0
	0.0	0.0	0.0
	0.0	0.0	0.0
	0.0	0.0	0.0
	0.0	0.0	0.0
	0.0	0.0	0.0
	Total Motor Controller Weight		
IDG Hydraulics	0.0	0.0	0.0
ASSET EPGDS Method			
74			

*Figure 21*

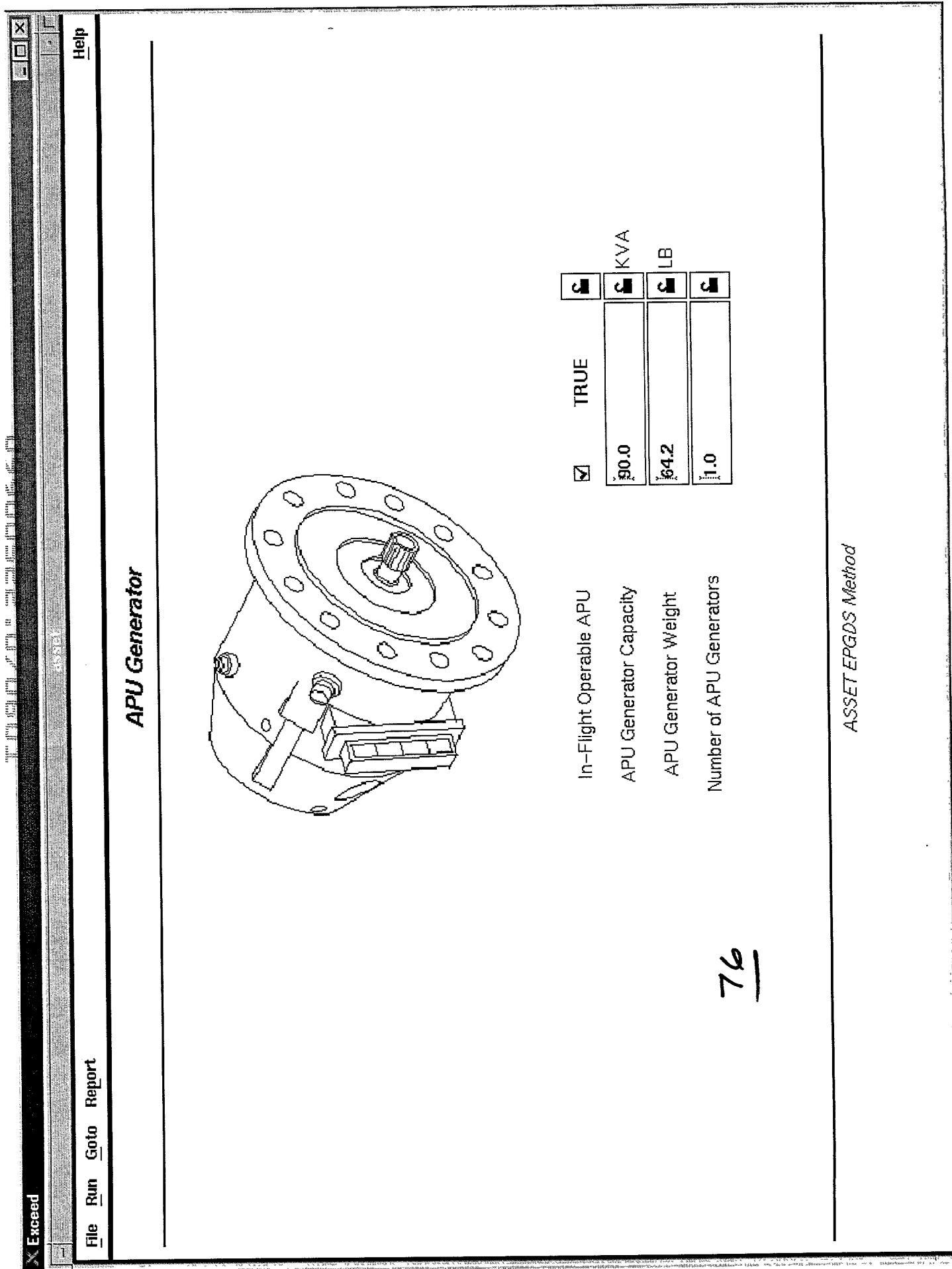


Figure 22

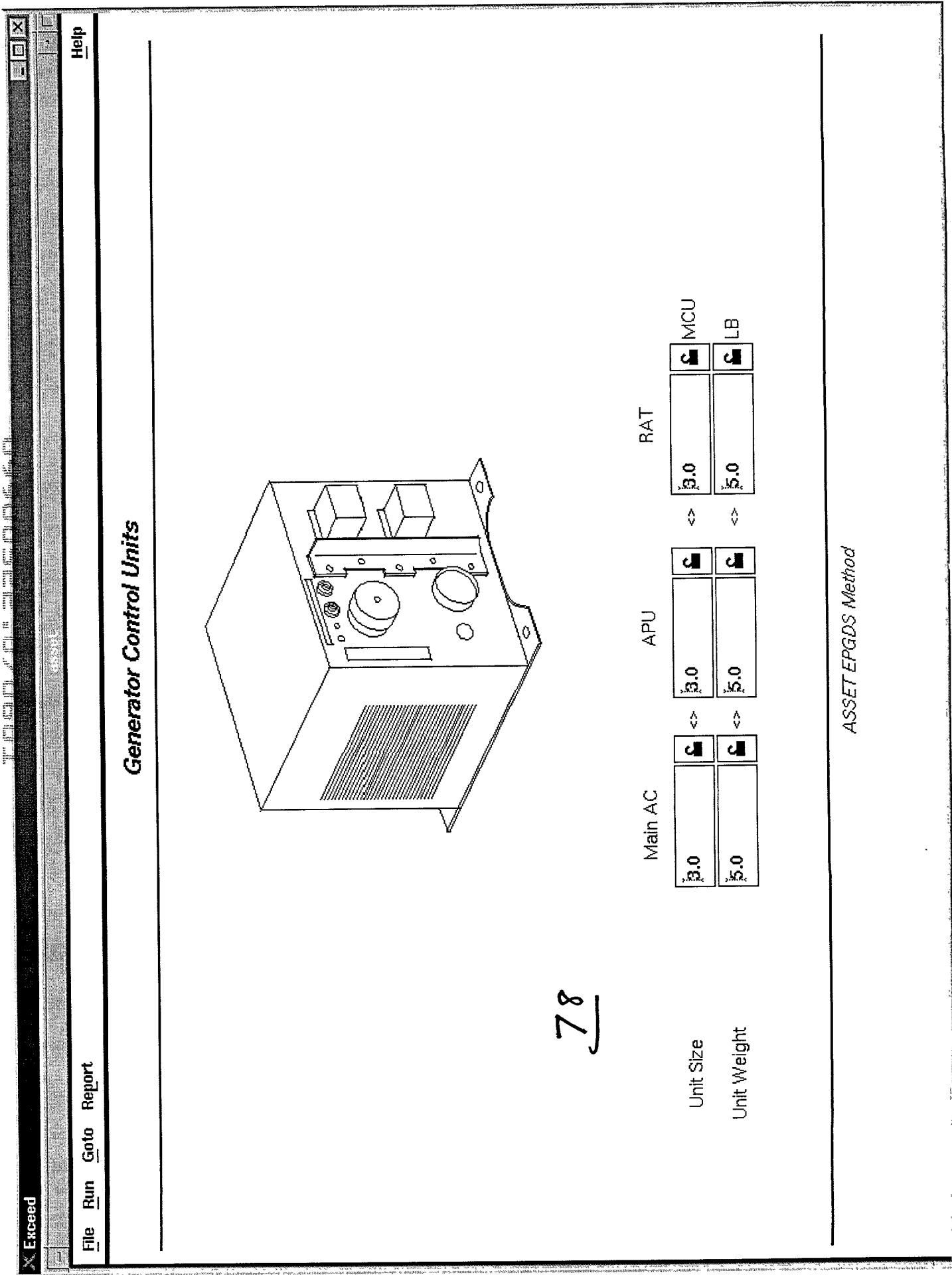


Figure 23

**Exced**

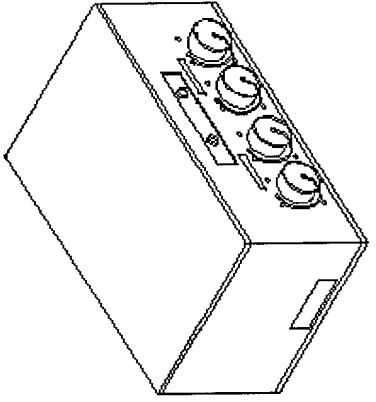
**File Run Goto Report Help**

---

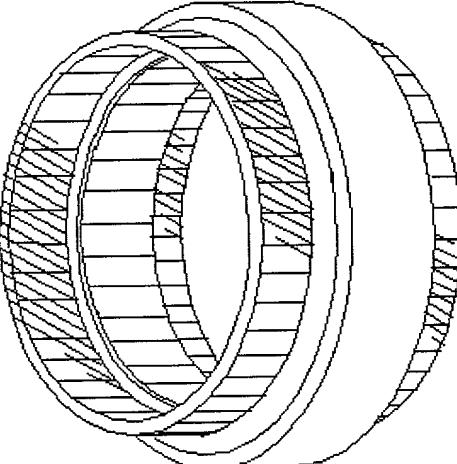
**Back Up AC Power**

---

**VSCF**



**PMGS**




---

<b>Generator Type</b>	<input type="button" value="▼"/>
<b>Capacity</b>	<input type="button" value="▼"/>
<b>Cooling Method</b>	<input type="button" value="▼"/>
<b>Input speed</b>	<input type="button" value="▼"/>
<b>Generator Weight</b>	<input type="button" value="▼"/>
<b>Converter Configuration</b>	<input type="button" value="▼"/>
<b>Converter Weight</b>	<input type="button" value="▼"/>

<b>VSCF System</b>	<input type="button" value="▼"/>
<b>18.8</b>	<input type="button" value="▼"/>
<b>Air</b>	<input type="button" value="▼"/>
<b>12000.0</b>	<input type="button" value="▼"/>
<b>38.1</b>	<input type="button" value="▼"/>
<b>Stand Alone Converter</b>	<input type="button" value="▼"/>
<b>43.1</b>	<input type="button" value="▼"/>

<b>KVA</b>	<input type="button" value="▼"/>
<b>RPM</b>	<input type="button" value="▼"/>
<b>LB</b>	<input type="button" value="▼"/>
<b>Number/Engine</b>	<input type="button" value="▼"/>
<b>PMG Configuration</b>	<input type="button" value="▼"/>
<b>PMG Unit weight</b>	<input type="button" value="▼"/>
<b>2.5</b>	<input type="button" value="▼"/>
<b>LB</b>	<input type="button" value="▼"/>

**ASSET EPGDS Method**

**80**

*Figure 24*

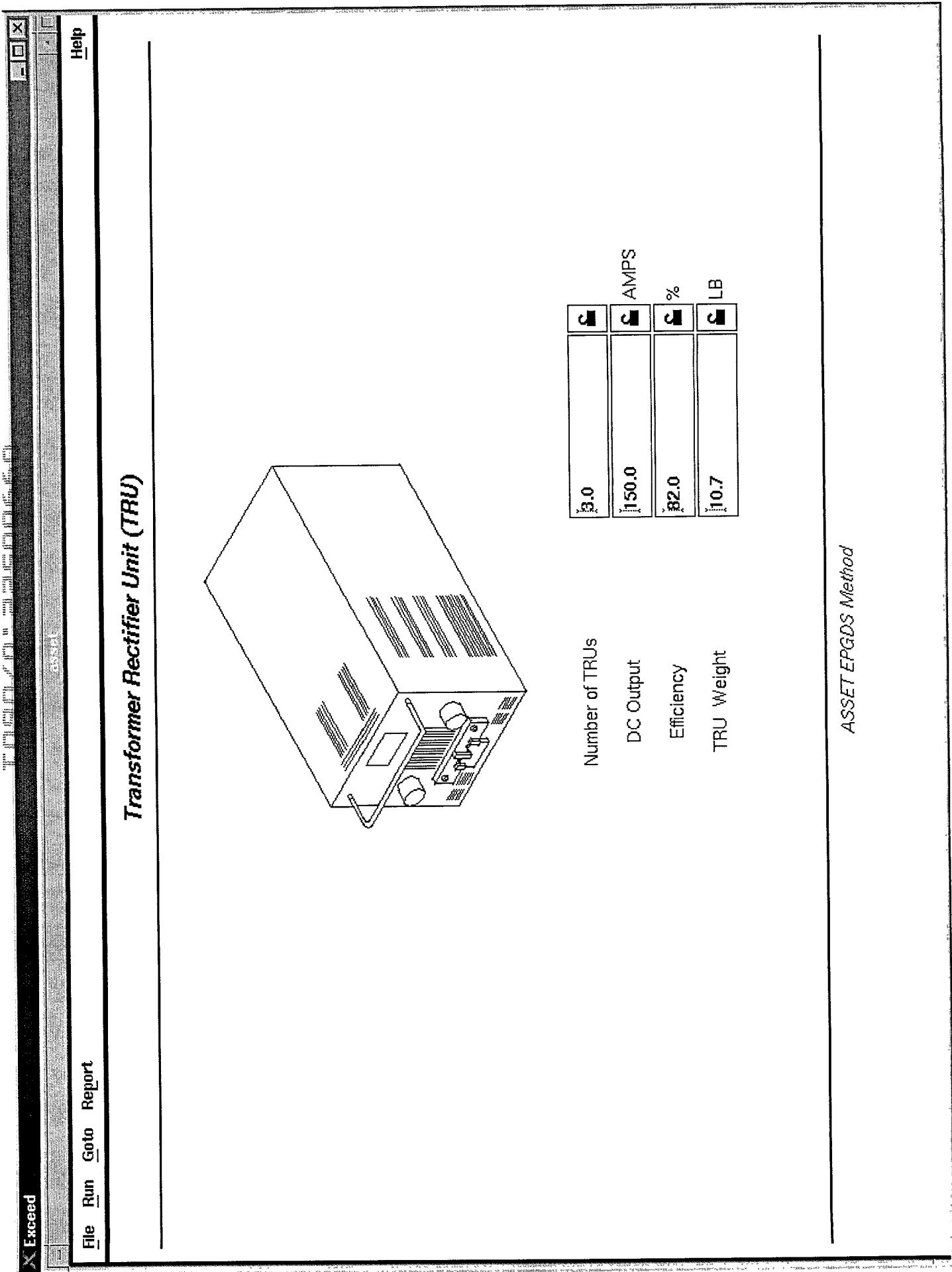
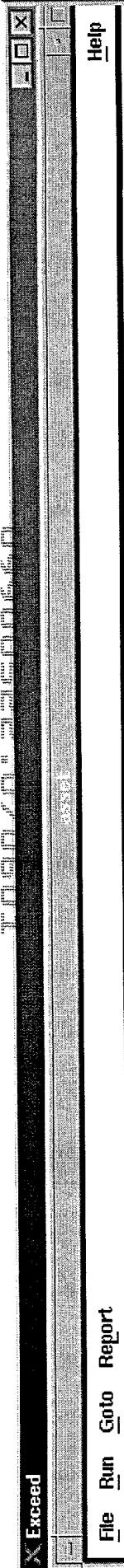
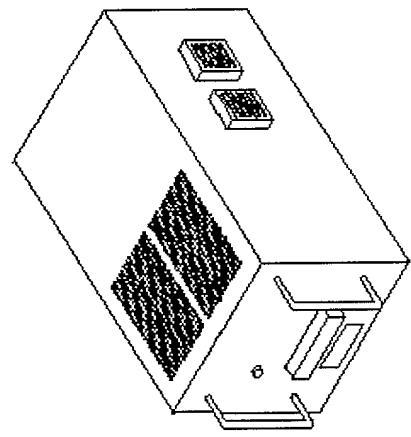
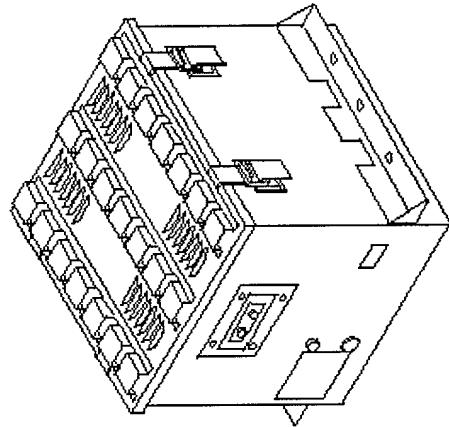


Figure 25



### Batteries and Battery Chargers



#### Batteries

MAIN Battery	
47.0	AMP-HRS
106.0	LB

Battery Chargers	
60.0	AMPS
13.0	LB

APU Battery	
47.0	AMP-HRS
106.0	LB

ASSET EPGDS Method	
60.0	AMPS
13.0	LB

FIGURE 26

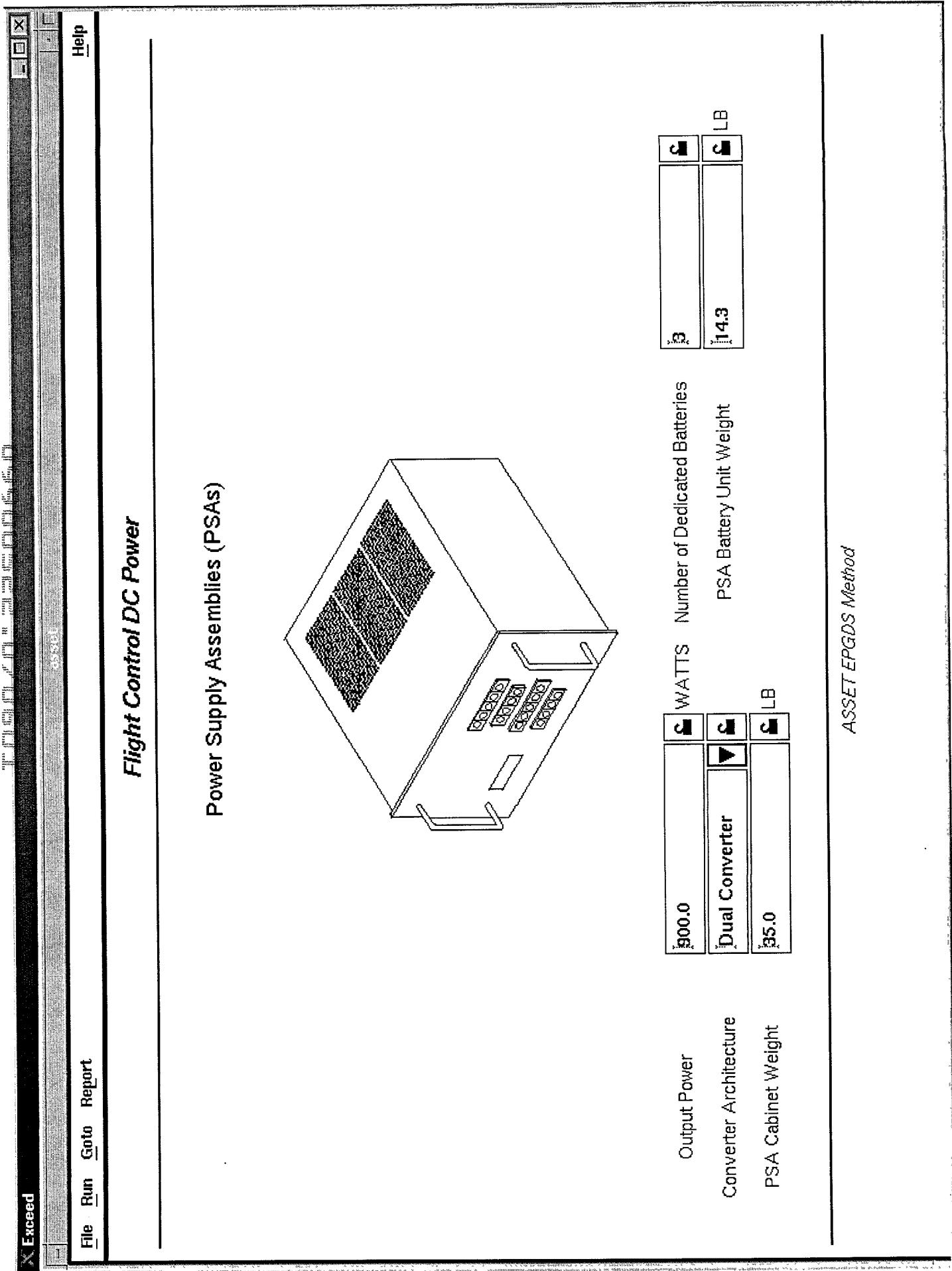
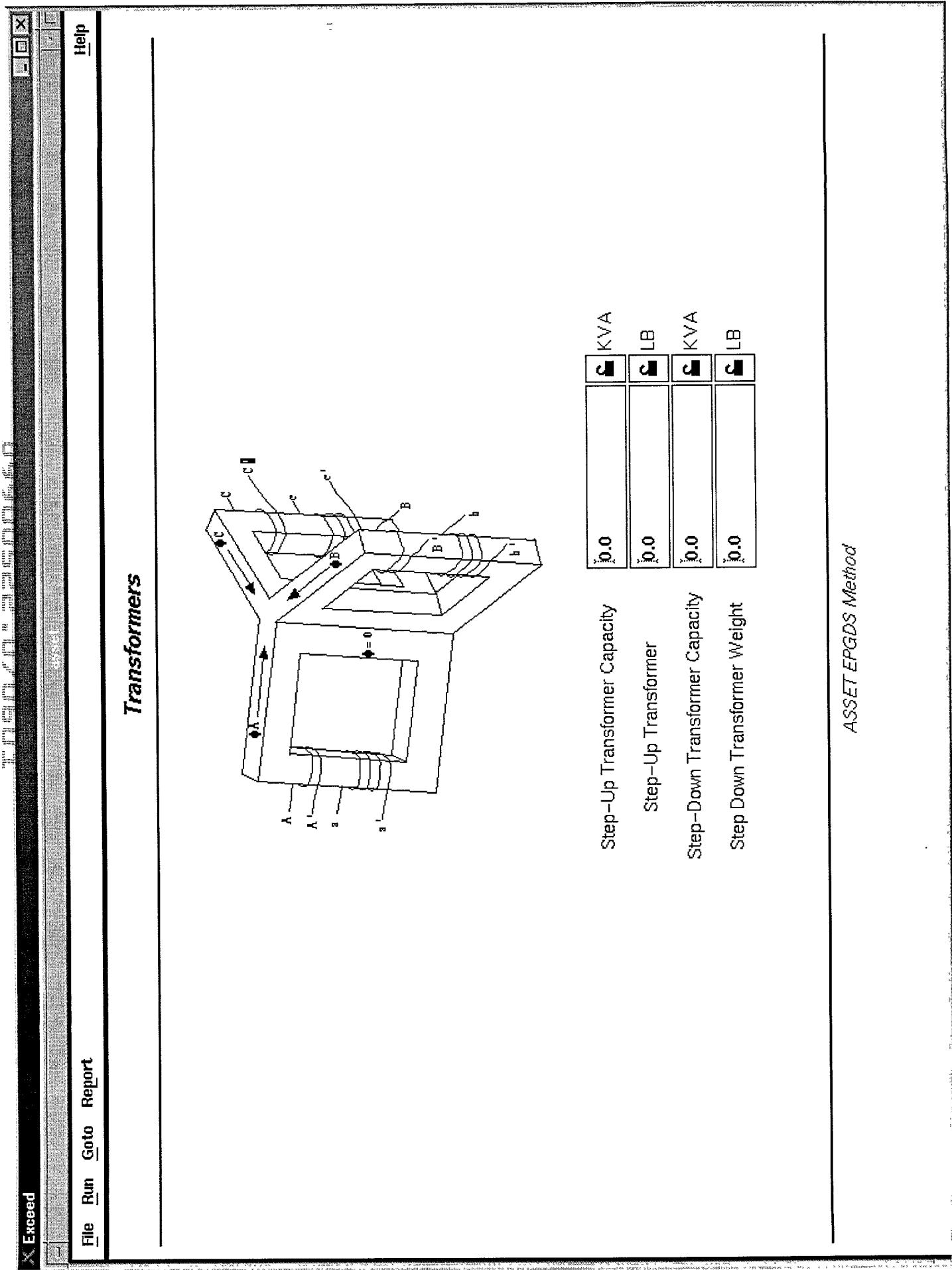


FIGURE 27



**FIGURE 28**

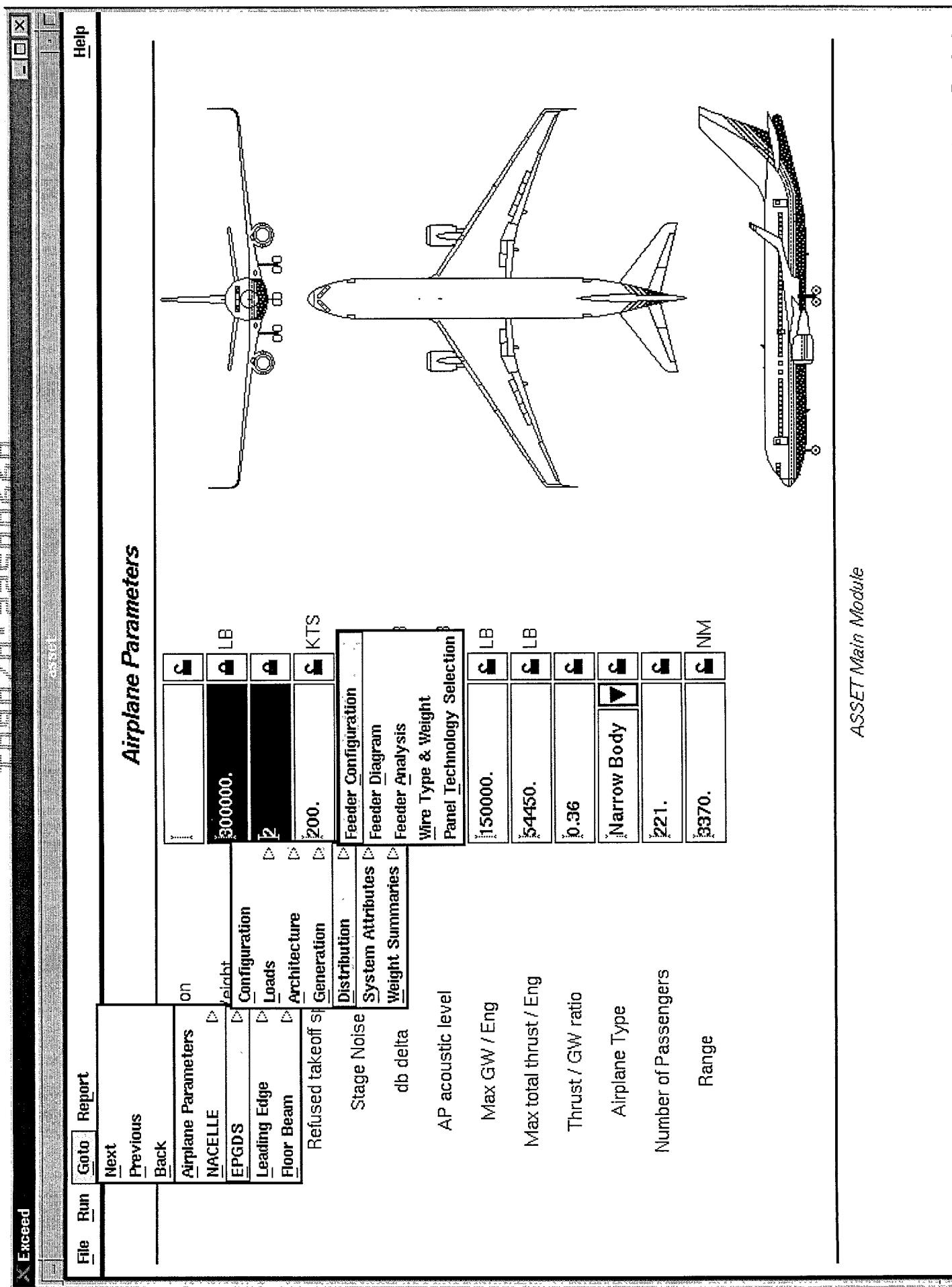


Figure 29

ASSET Main Module

**Exceed**

**File Run Goto Report**

**Show Data for:** **MAIN**

**Feeder Configuration**

---

<i>Feeder 1:</i>	↔	3-Wire w/NtrI
<i>Feeder 2:</i>	↔	2 3-Wire w/NtrI
<i>Feeder 3:</i>	↔	2 3-Wire w/NtrI
<i>Feeder 4:</i>	↔	2 3-Wire w/NtrI
<i>Feeder 5:</i>	↔	None

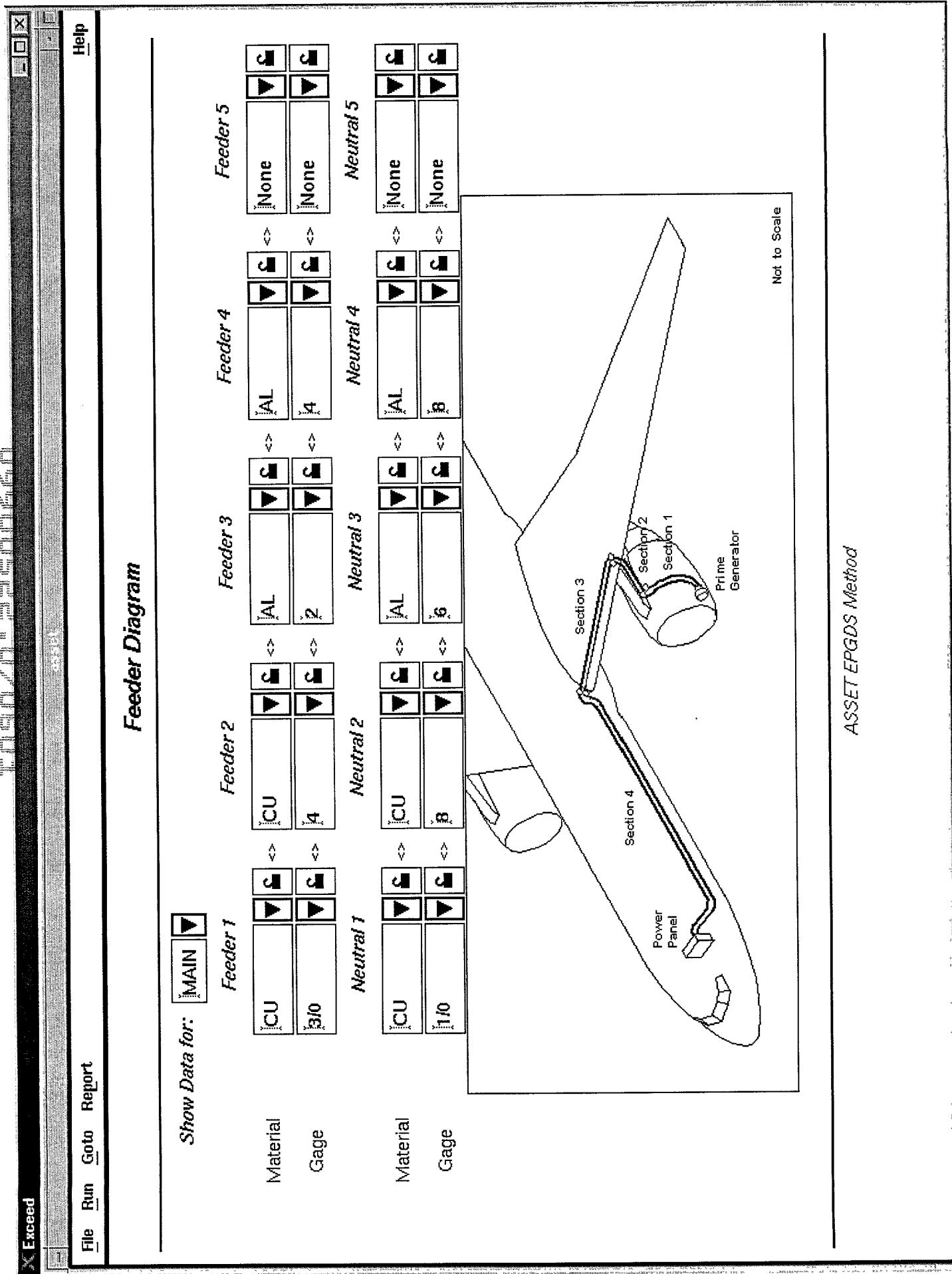
---

**Bundle Cross-Sections**

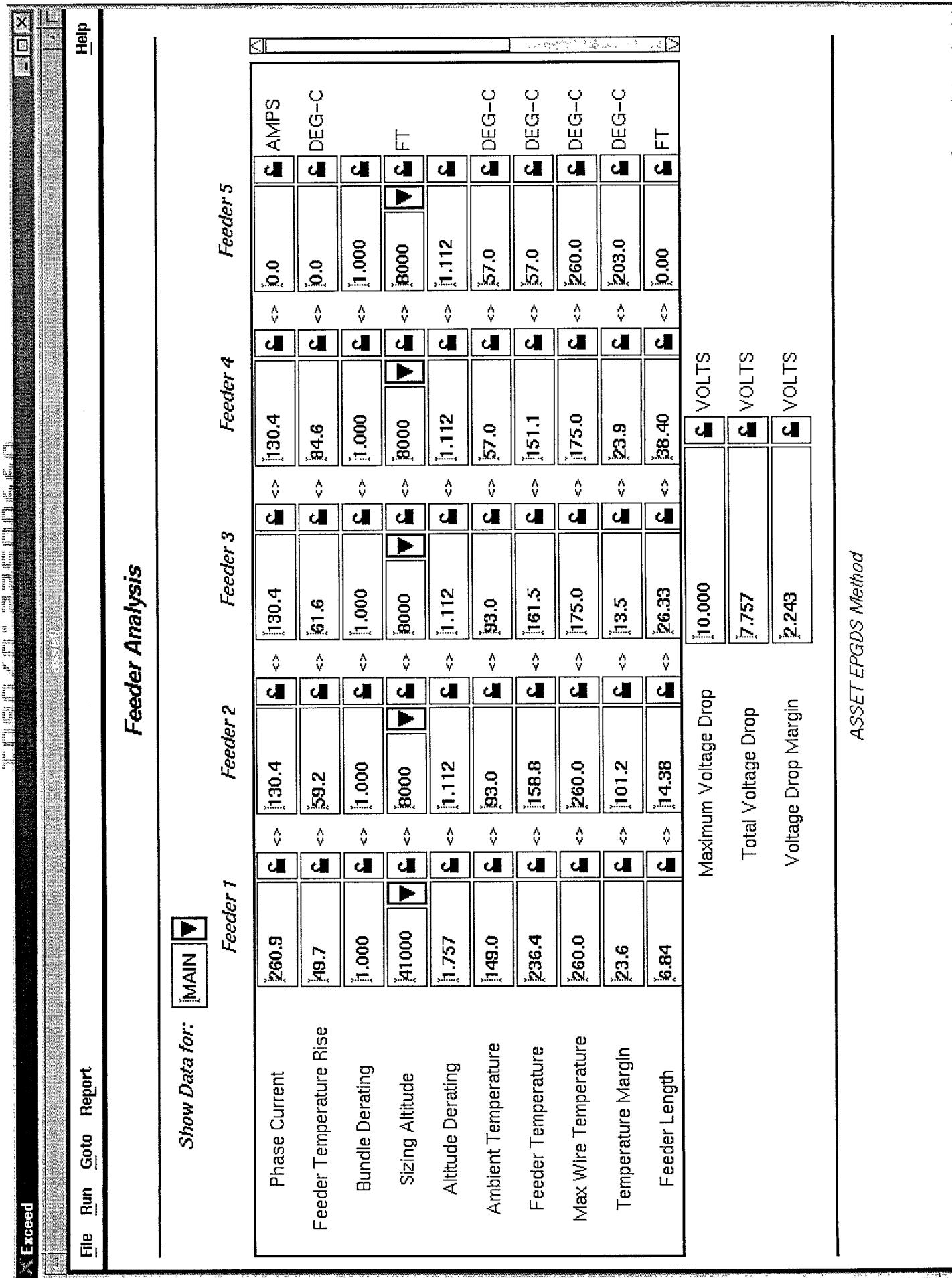
3-Wire w/Spcr	3-Wire w/Spcr	2 3-Wire	2 3-Wire w/Spcr	6-Wire	6-Wire w/Spcr	6-Wire w/NtrI	6-Wire w/NtrI w/Spcr	Blank

**ASSET EPGDS Method**

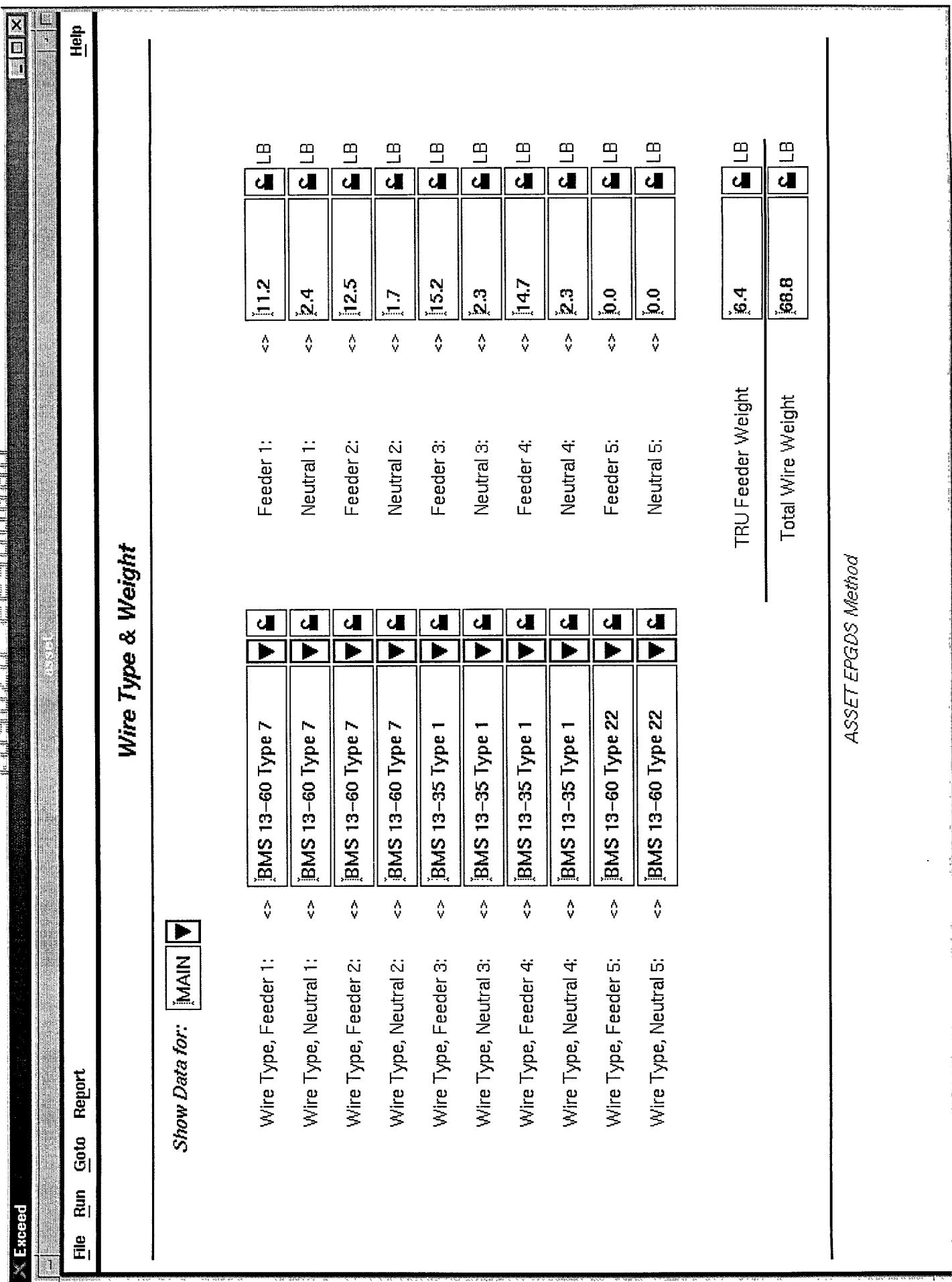
**Figure 30**



**Figure 31**



**FIGURE 32**



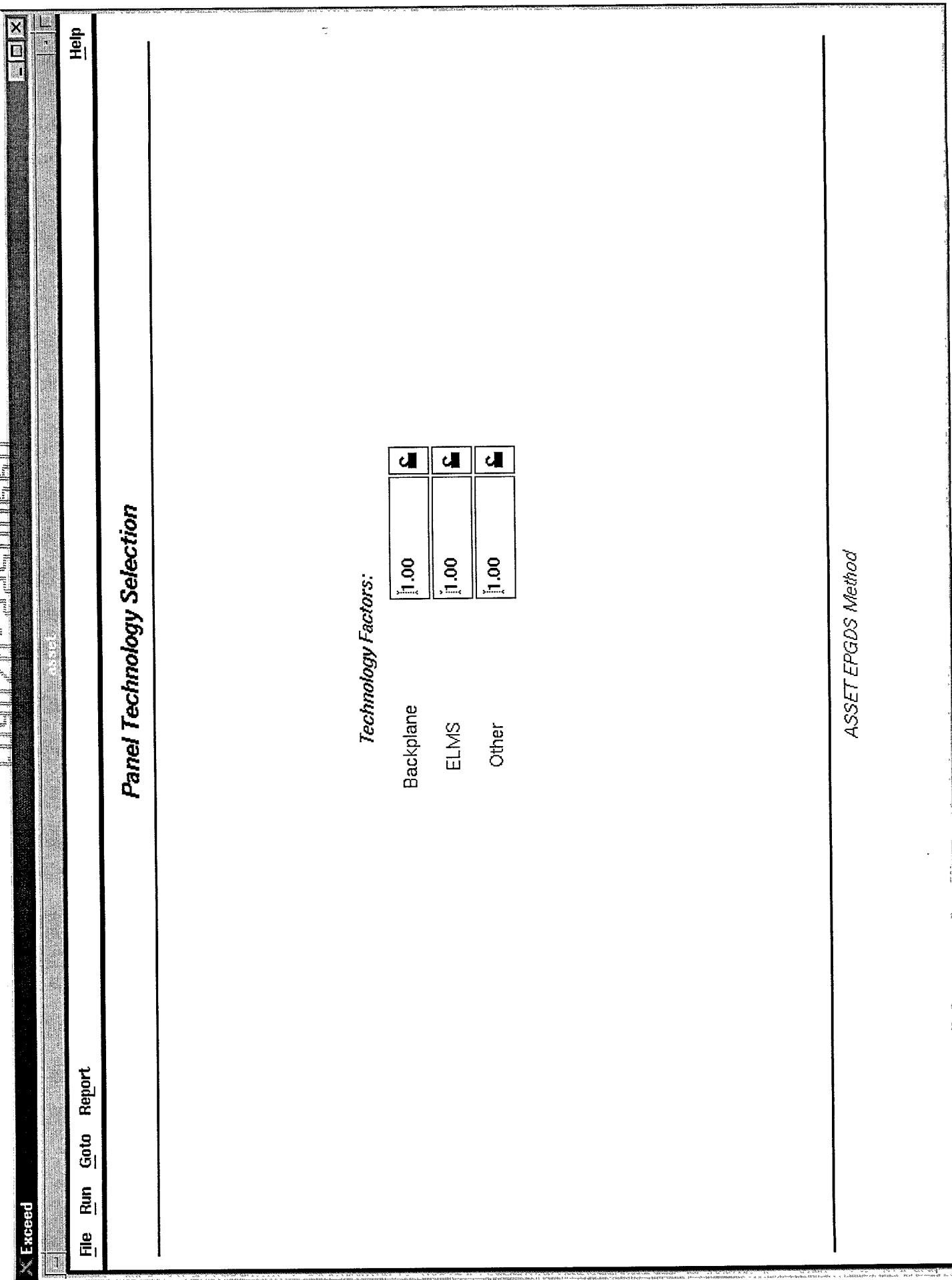


FIGURE 34

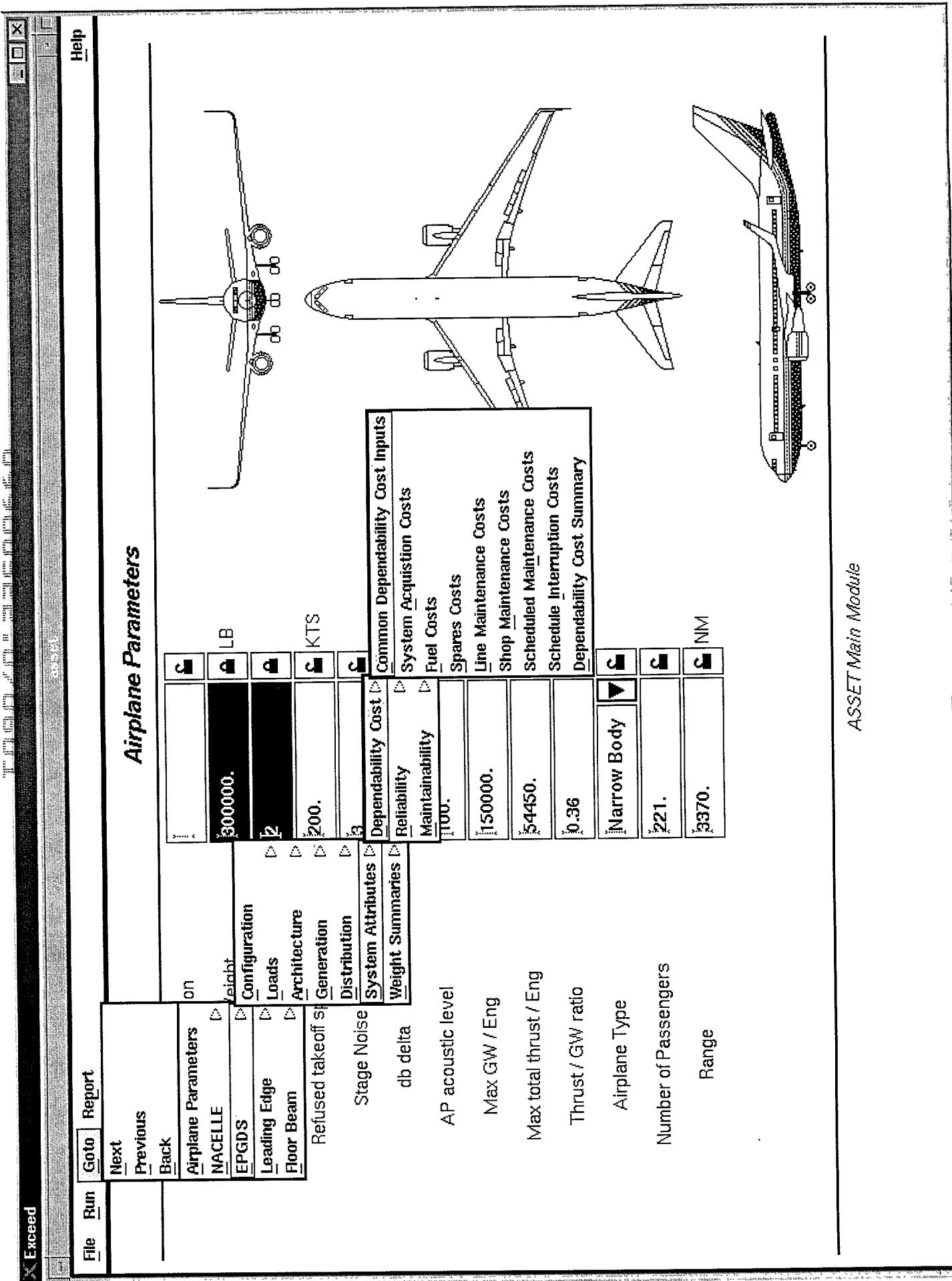


FIGURE 35

**Exceed**

**File Run Goto Report Help**

---

### **Common Dependability Cost Inputs**

---

Number of Main Generators per Airplane	2	GENS
Average Number of Flights per Year per Airplane	1100.	FLIGHTS
Average Flight Hours per Flight	3.40	HRS
Airplane Fleet Size	30	FLEET
Length of System Life in Years (1 – 30 Yrs.)	30	YEARS
Average Non-fuel Inflation Rate beyond Present Year	0.035	%
Minimum Attractive Rate of Return	0.12	%

---

ASSET EPGDS Method

*FIGURE 36*

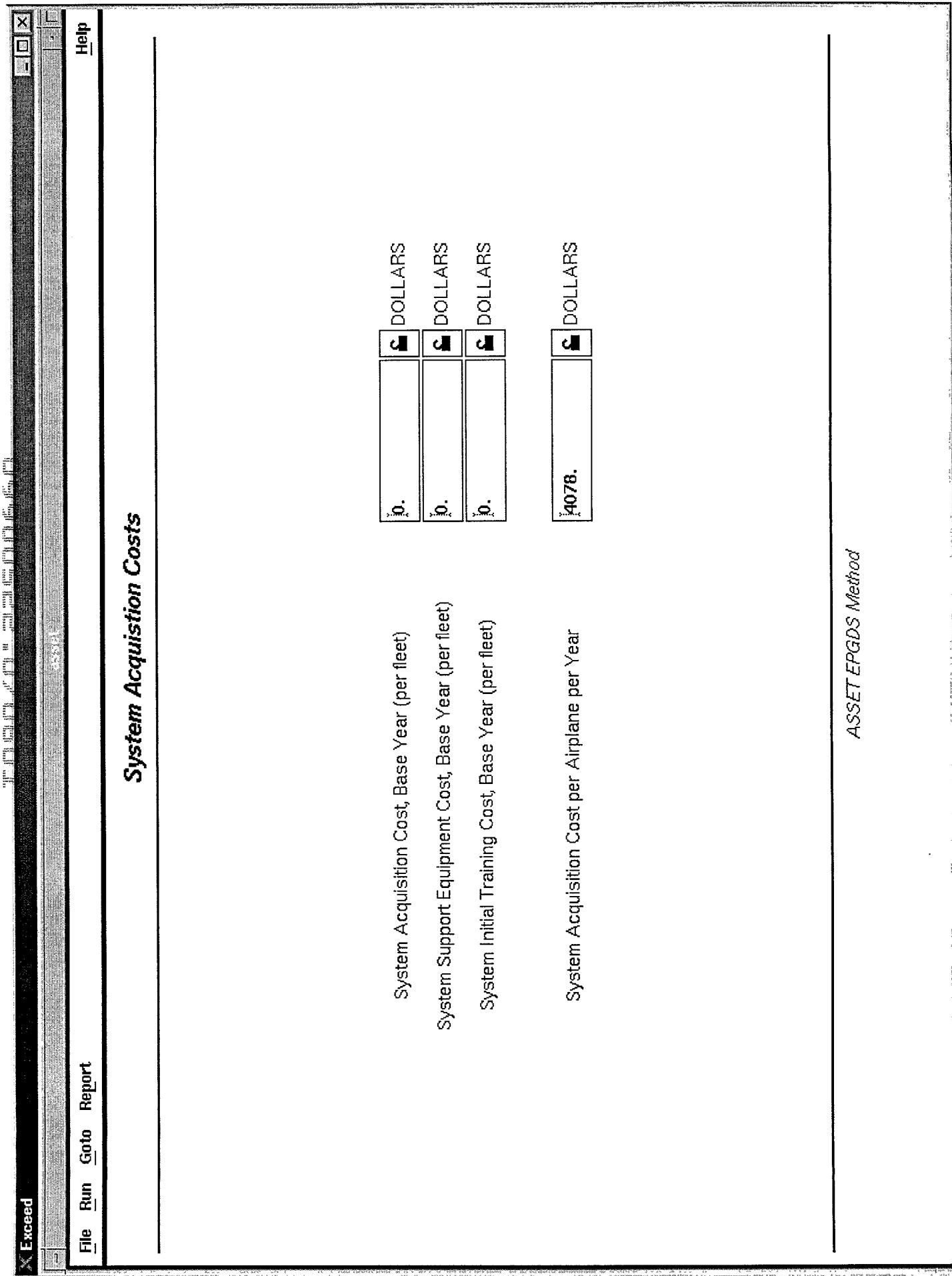


Figure 37

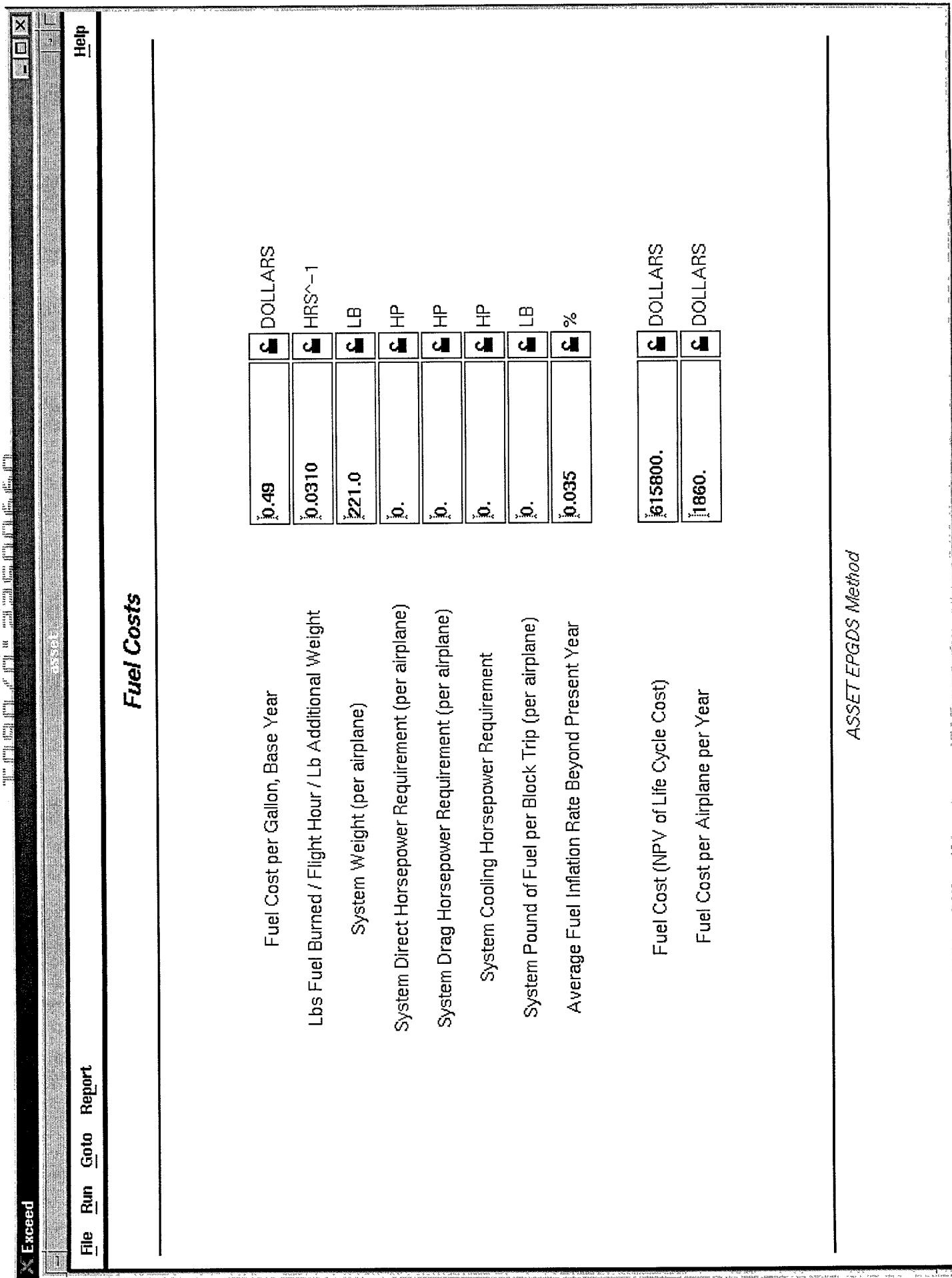


Figure 38

**Exceed**

File Run Goto Report Help

### Spares Costs

Cost / Spare Unit, Base Year	\$ 270000.	DOLLARS
Spares Holding Factor	0.12	%
Shop Turnaround Time in Days	34.0	DAYS
Main Base Fill Rate (must be less than 1)	0.95	
Mean Time Between Unscheduled Removals	12000.	HRS
Mean Time Between Overhauls	0.	HRS
Number of Spares Required	5.	
Initial Spares Cost	\$ 1350000.	DOLLARS
Spares Holding Cost (NPV of Life Cycle Cost)	\$ 1787786.	DOLLARS
Spares Cost (NPV of Life Cycle Cost)	\$ 3137786.	DOLLARS
Spares Cost per Airplane per Year	\$ 9478.	DOLLARS

---

ASSET EPGDS Method

Figure 39

Line Maintenance Costs	
<input type="checkbox"/> Exceeds	
<u>File</u>	<u>Run</u>
<u>Goto</u>	<u>Report</u>
<u>Help</u>	
<hr/>	
Direct Labor Rate per Hour	\$ 21.00 DOLLARS/HOUR
Maintenance Labor Burden Factor	2.4
Mean Time Between Unscheduled Removals	12000. HRS
Line Labor Hours Required per Removal	2.0 HRS
Line Labor Hours per Maintenance Action (Non-Removal)	0.5 HRS
Maintenance Actions per 1000 Flight Hours (Non-Removal)	0.50 HRS^-1
<hr/>	
Line Maintenance Cost (NPV of Life Cycle Cost)	\$ 73673. DOLLARS
Line Maintenance Cost per Airplane per Year	\$ 223. DOLLARS
<hr/>	
ASSET EPGDS Method	

Figure 40

Shop Maintenance Costs	
Direct Labor Rate per Hour	\$ 21.00      \$ DOLLARS/HOUR
Maintenance Labor Burden Factor	2.4
Mean Time Between Unscheduled Removals	12000.      HRS
Main Generator Mean Time Between Failures	26000.      HRS
Mean Time Between Overhauls	0.      HRS
Shop Labor Man-Hours per Unconfirmed Failure (Test Time)	8.0
Shop Labor Man-Hours per Failure (Repair and Test)	48.0
Shop Labor Hours per Overhaul	0.0
Average Shop Material Cost per Failure, base year	\$ 67500.      \$ DOLLARS
Overhaul Materials Cost per Overhaul	0.      \$ DOLLARS
Shop Maintenance Cost (NPV of Life Cycle Cost)	\$ 819057.      \$ DOLLARS
Shop Maintenance Cost per Airplane per Year	\$ 20597.      \$ DOLLARS

*Figure 41*

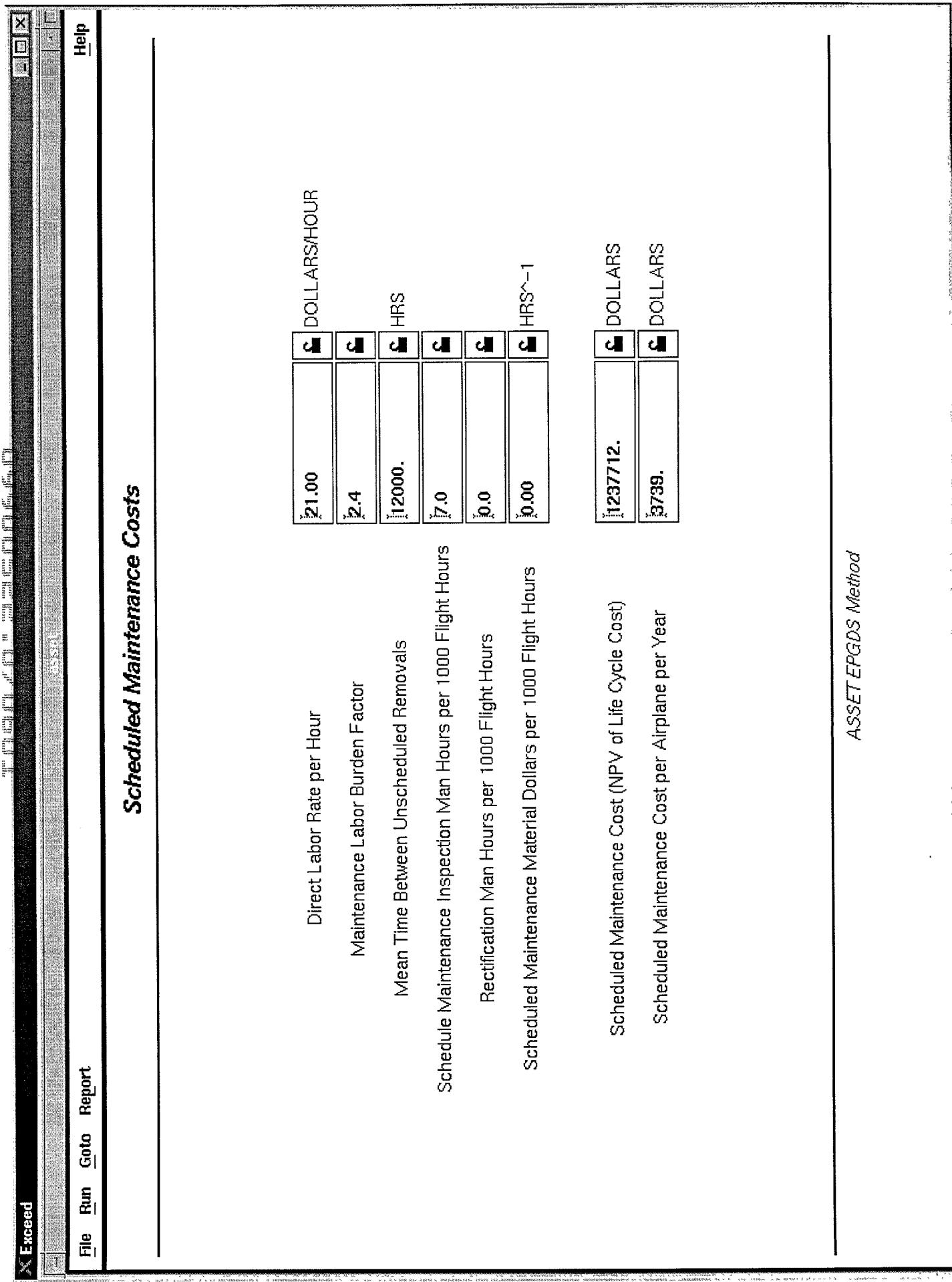


FIGURE 42

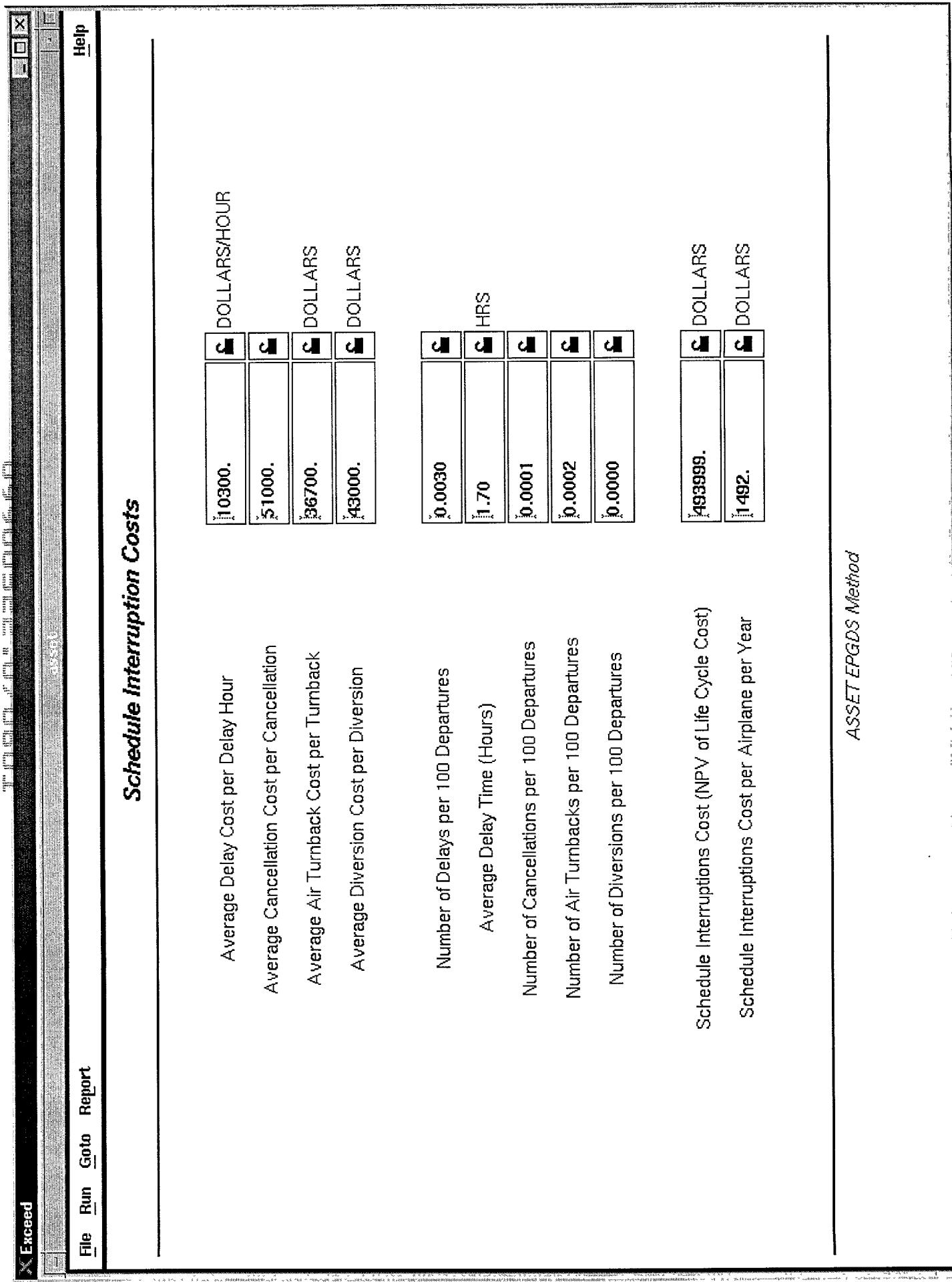


Figure 4/3

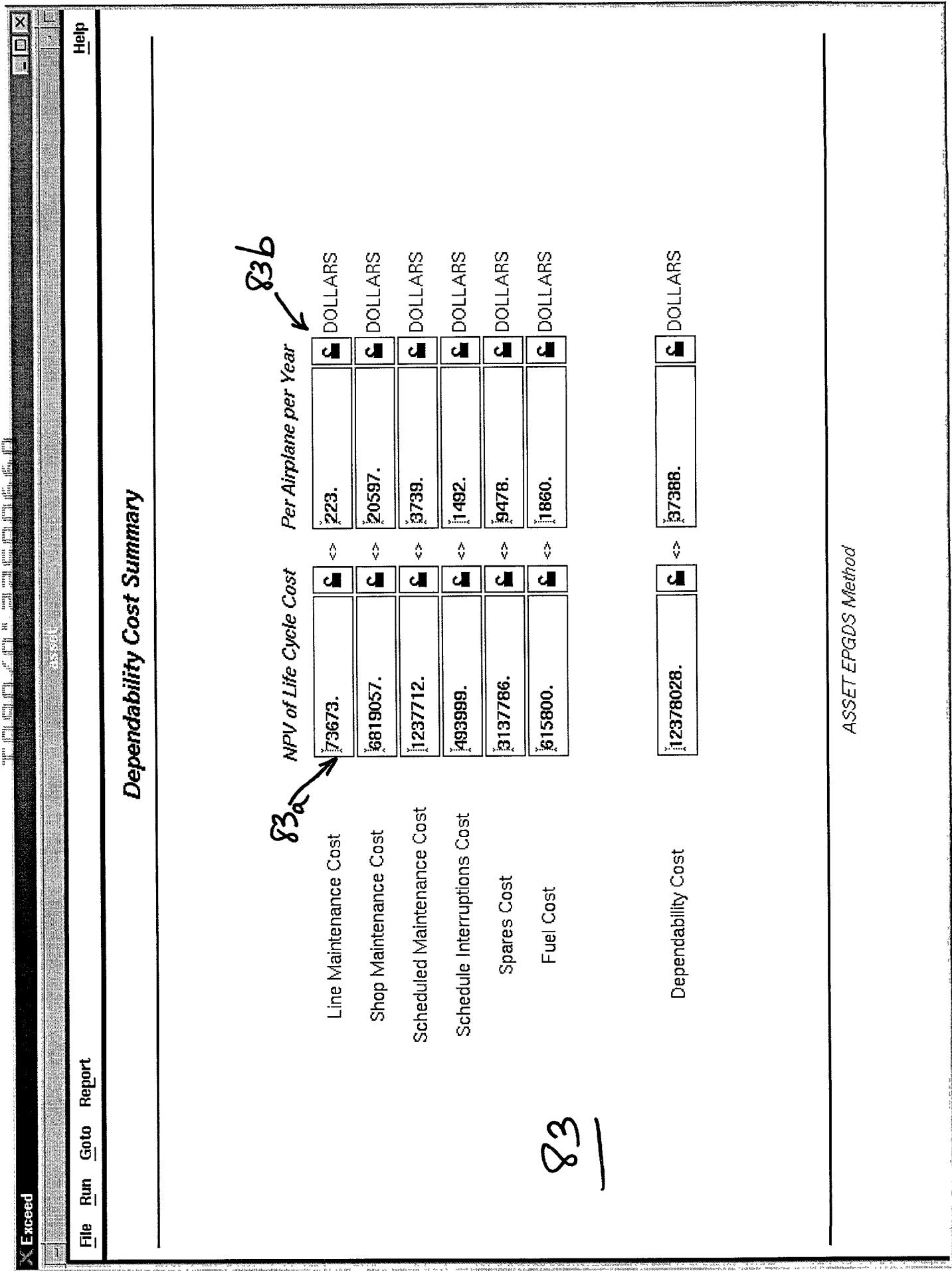


Figure 44

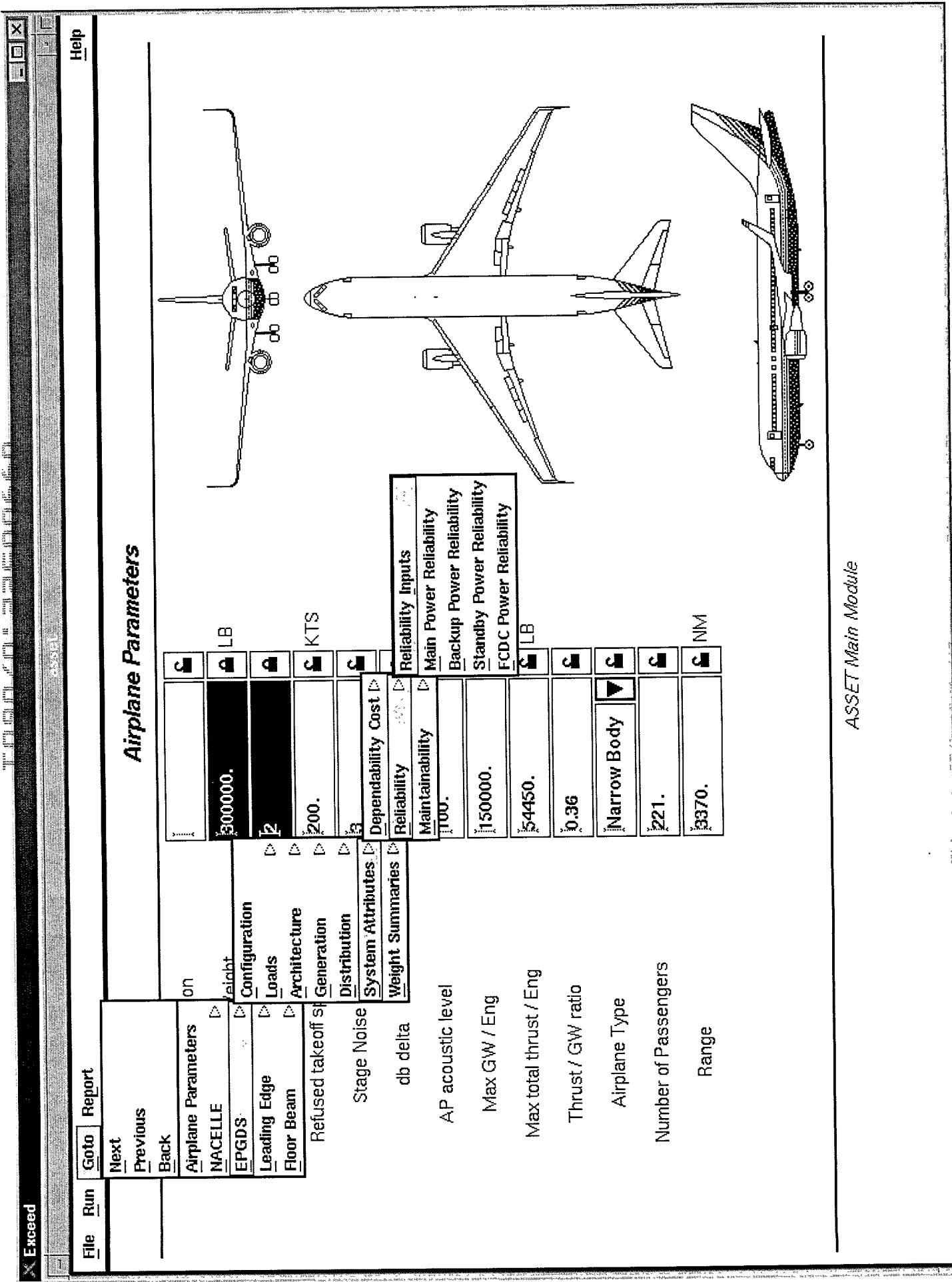


Figure 4/5

ASSET Main Module

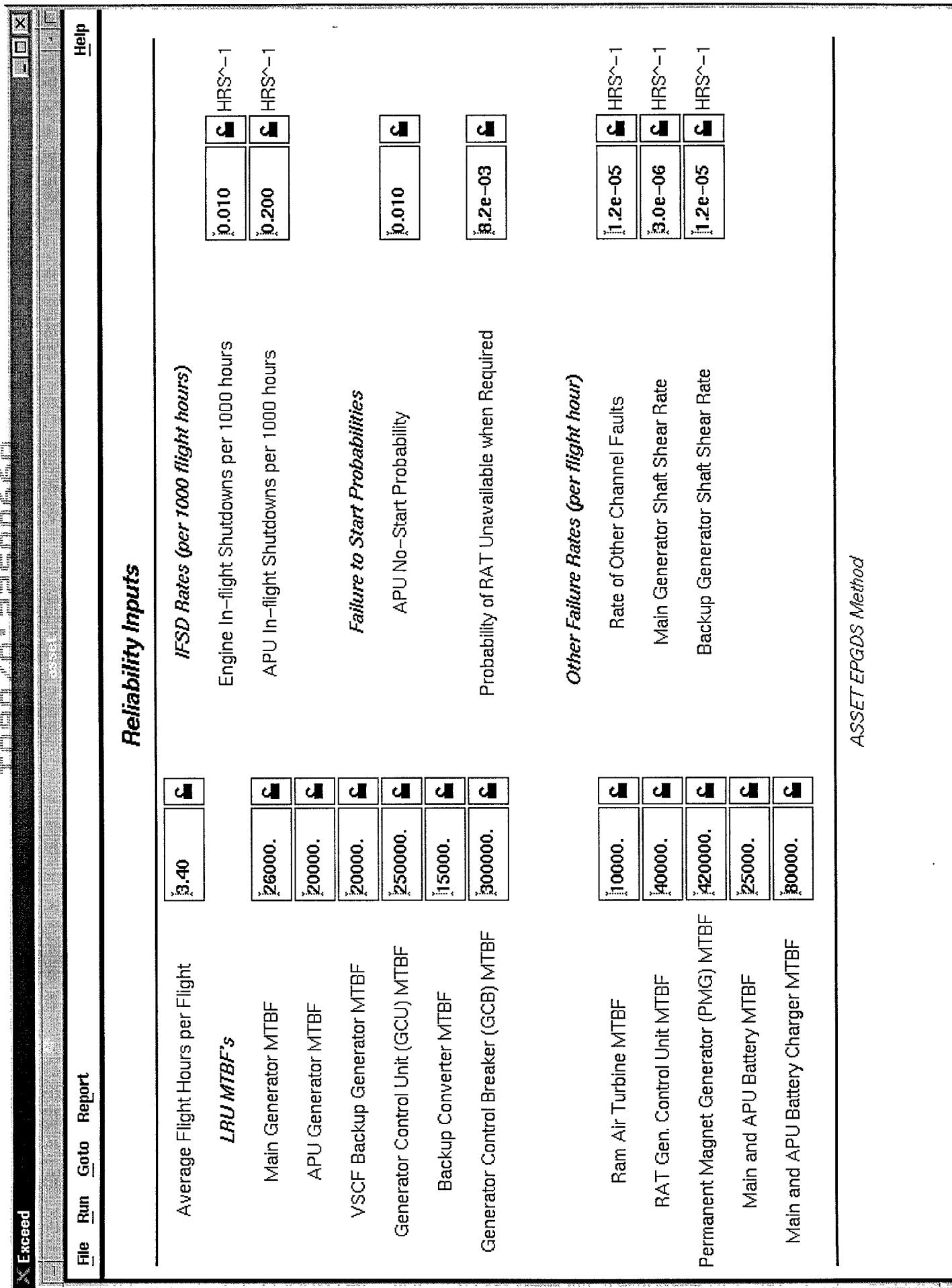


Figure 46

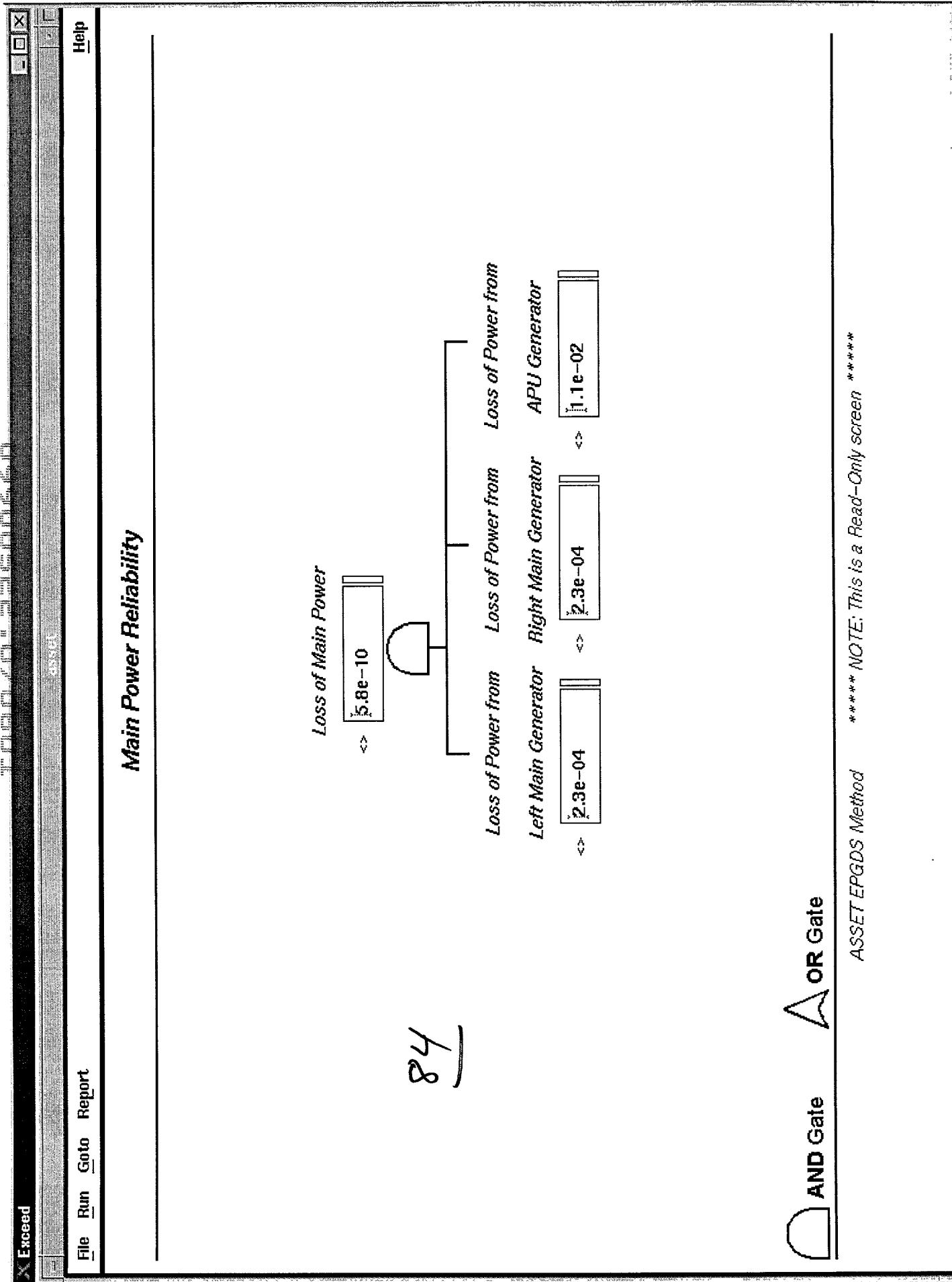


FIGURE 47

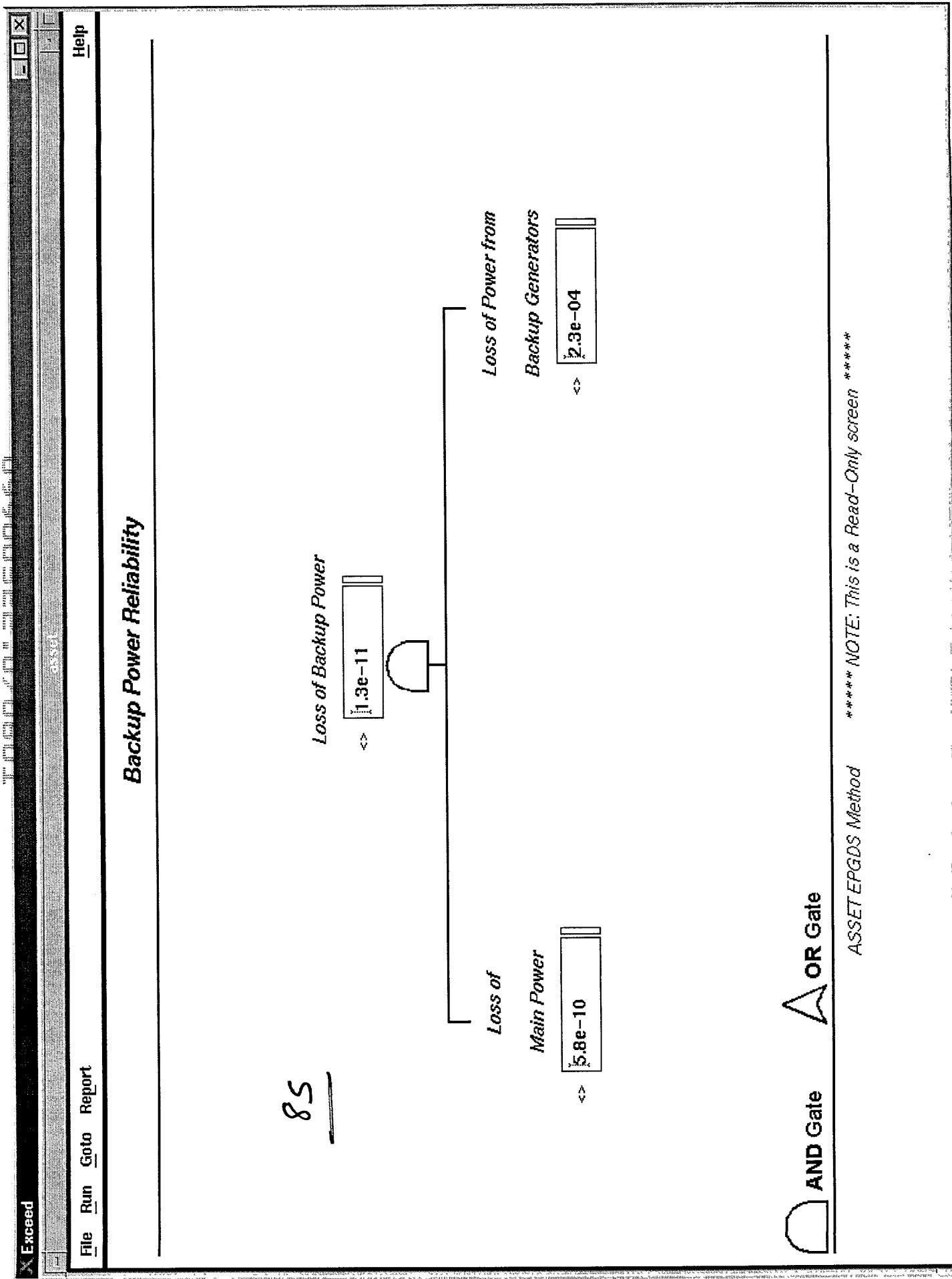


FIGURE 48

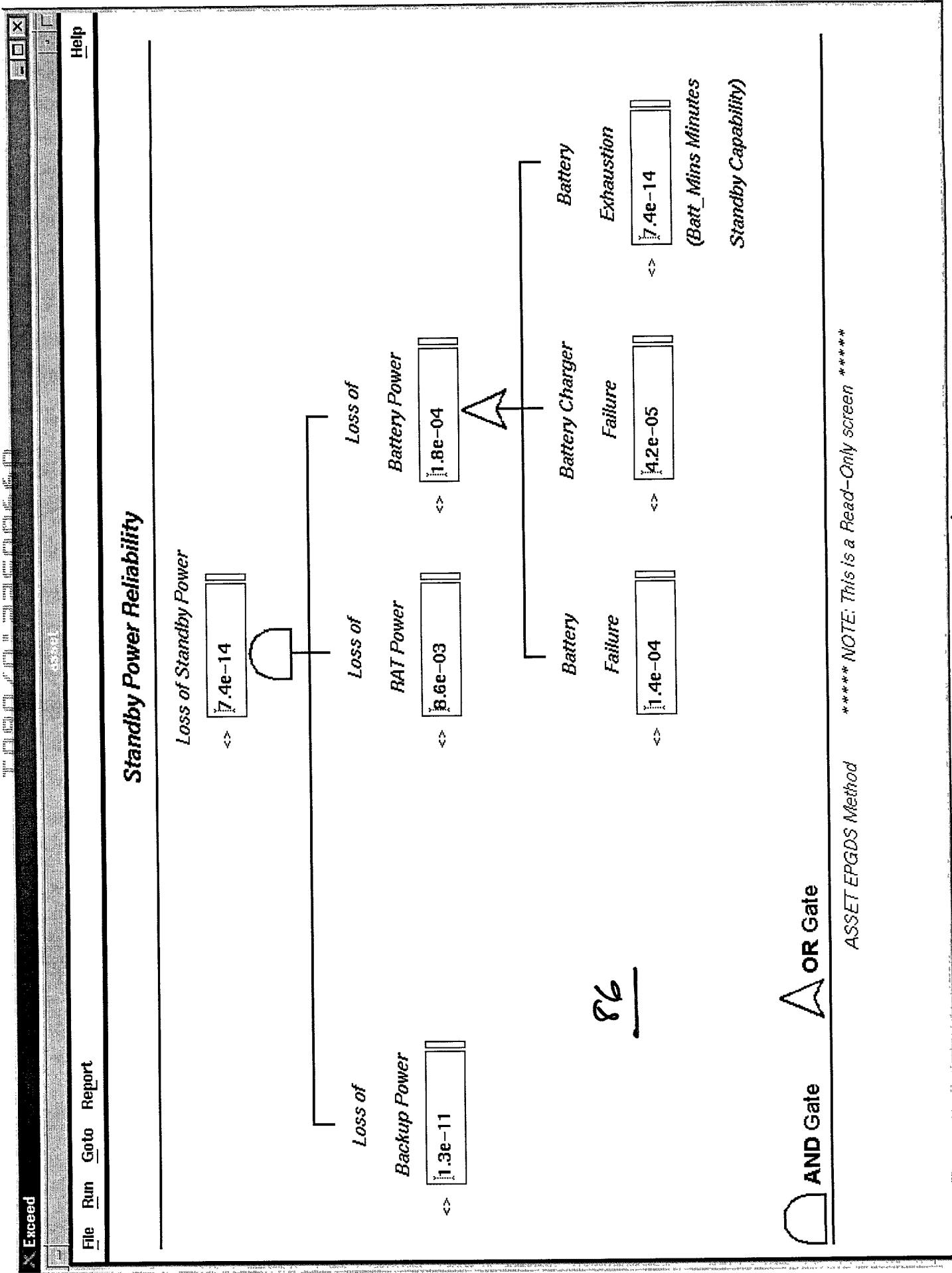


Figure 49

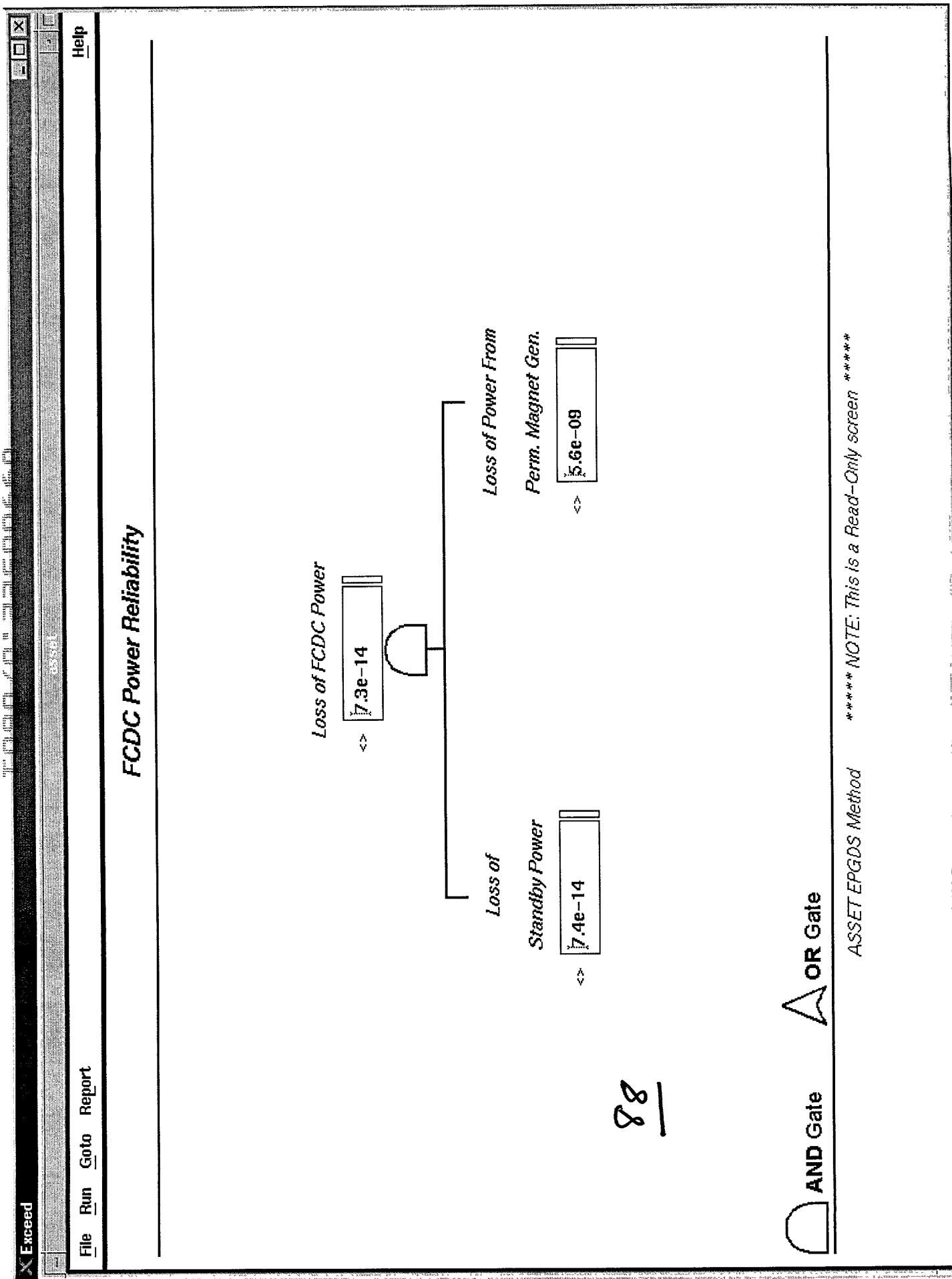


Figure 50

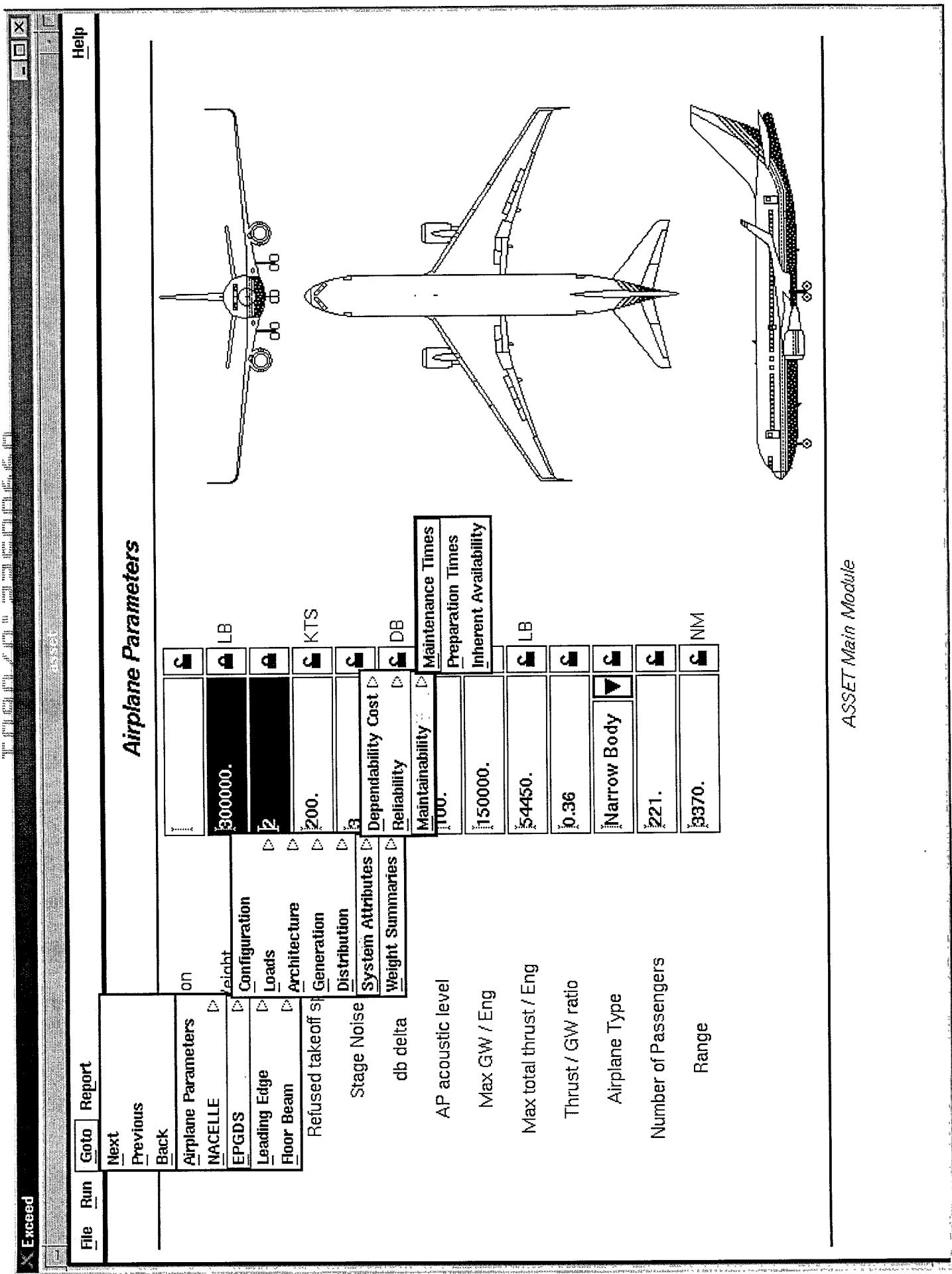


Figure 51

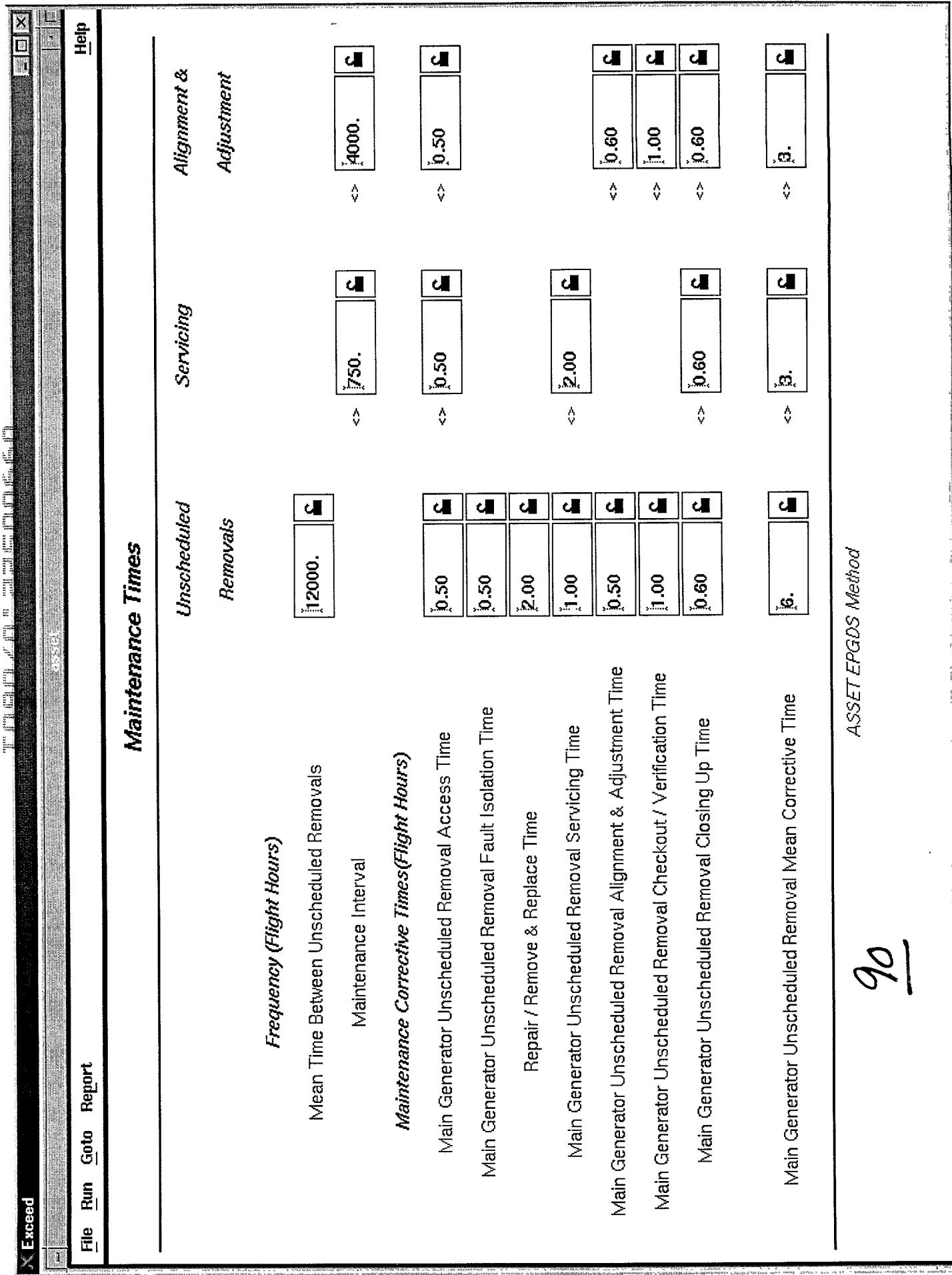
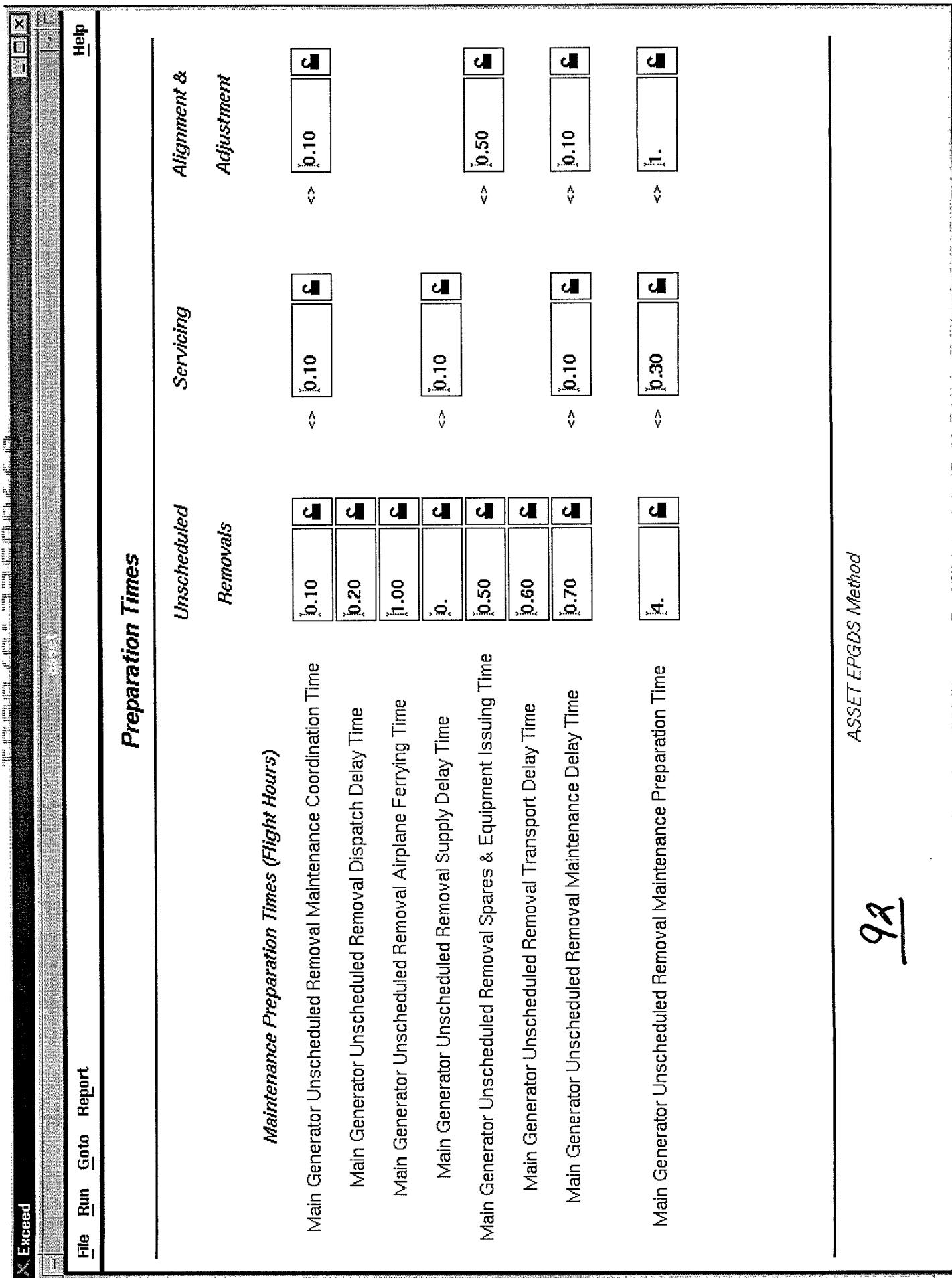


FIGURE 52



**FIGURE 53**

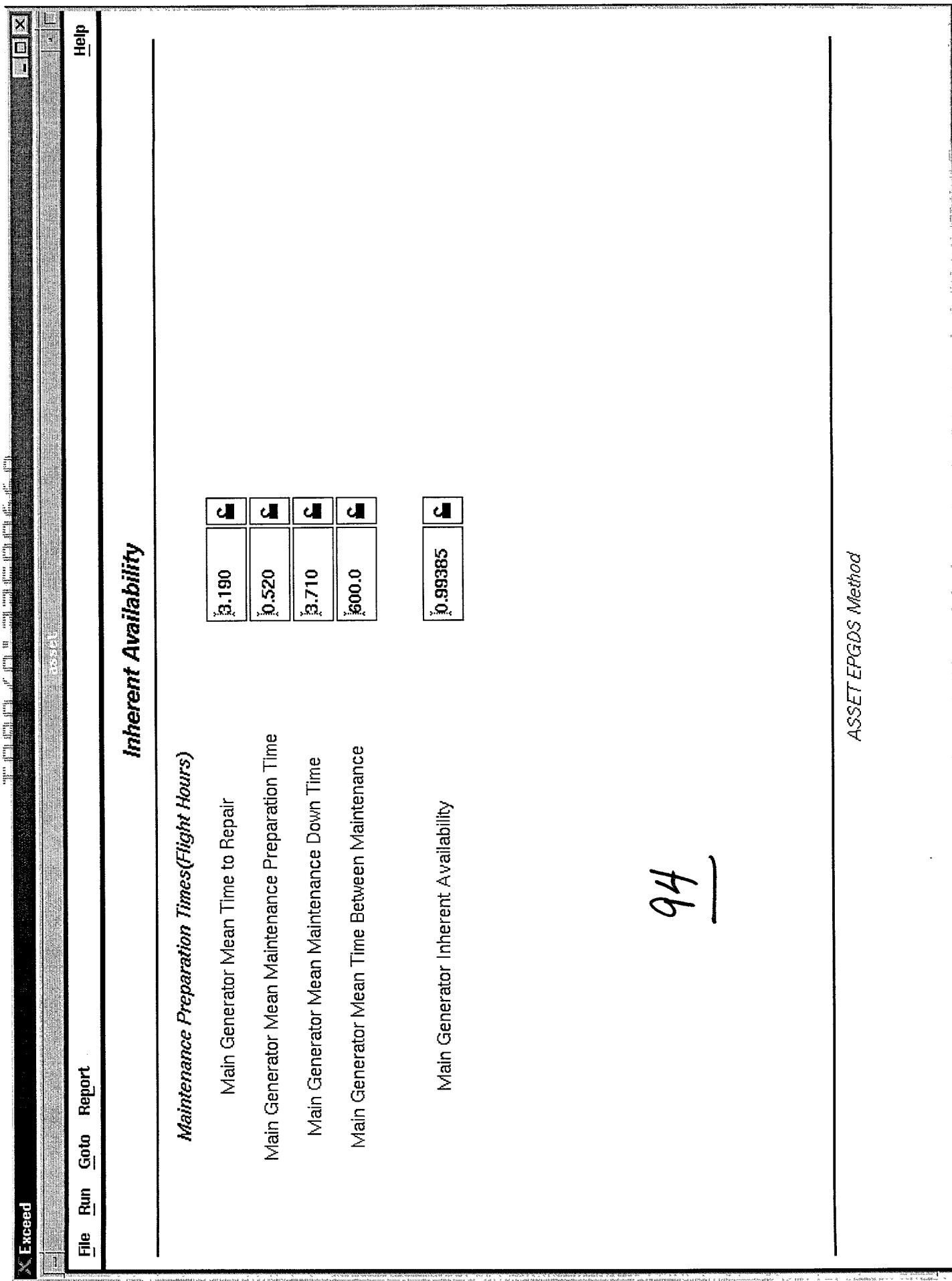


Figure 54

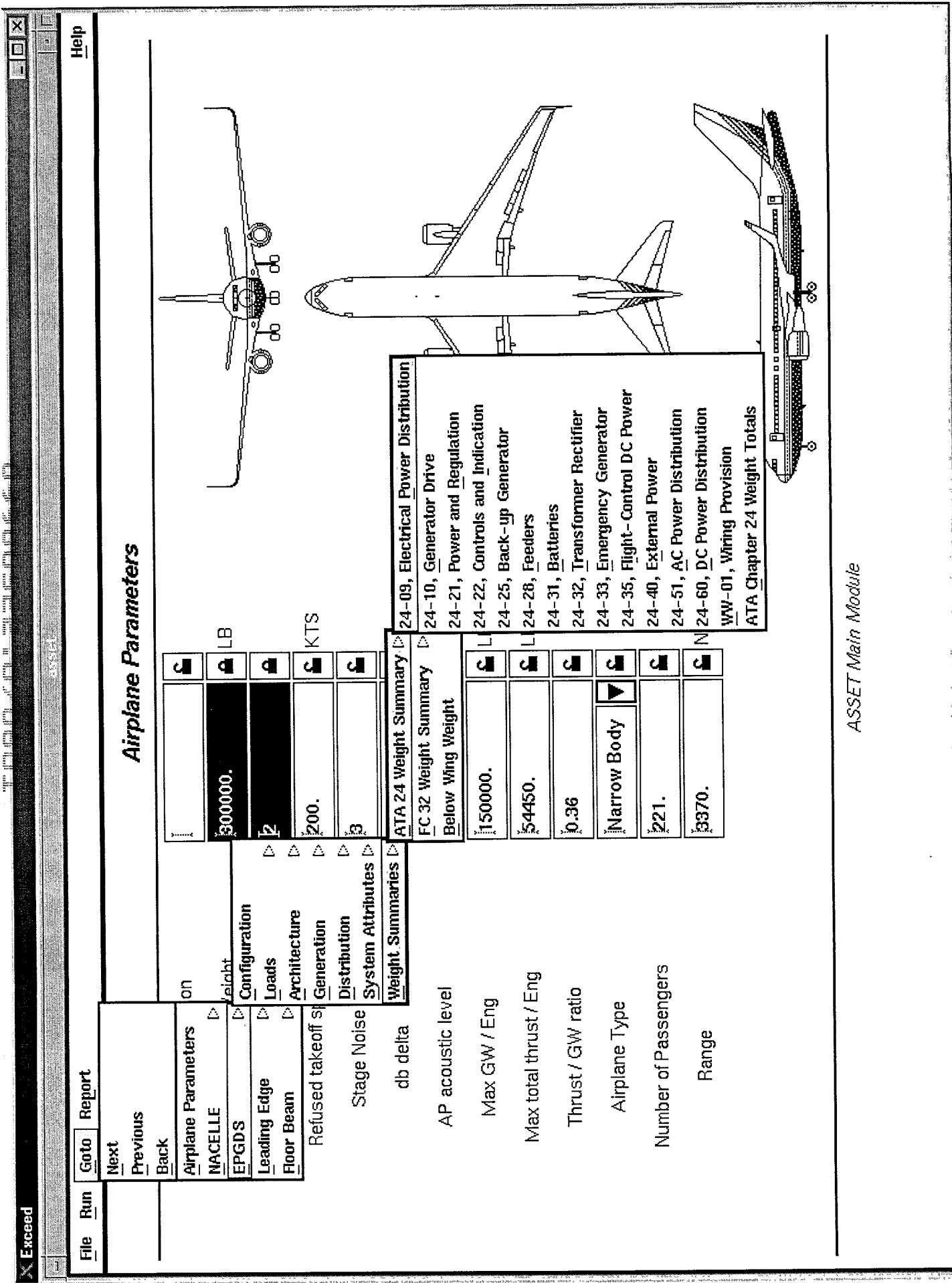


FIGURE 55

ASSET Main Module

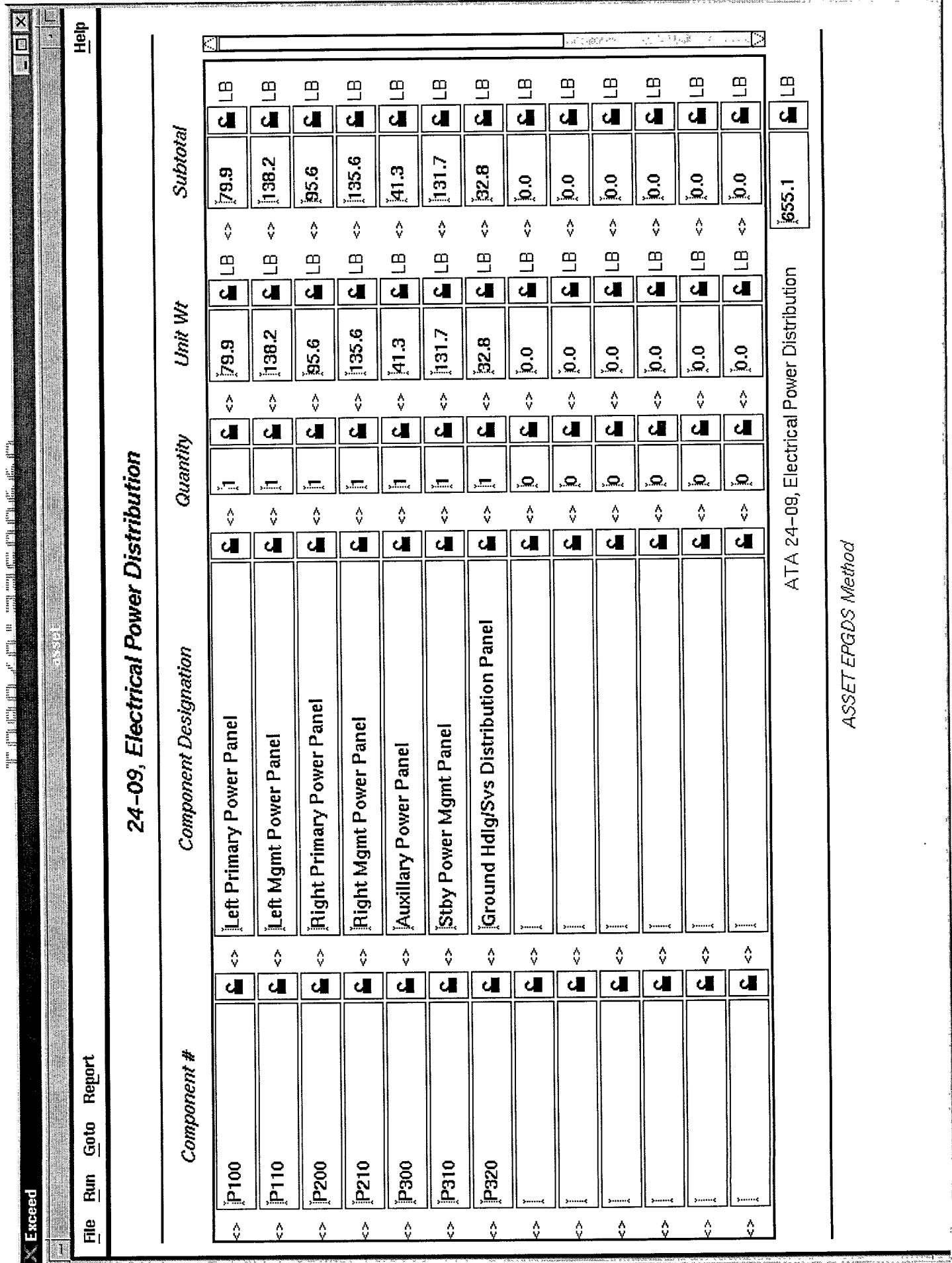


FIGURE 56

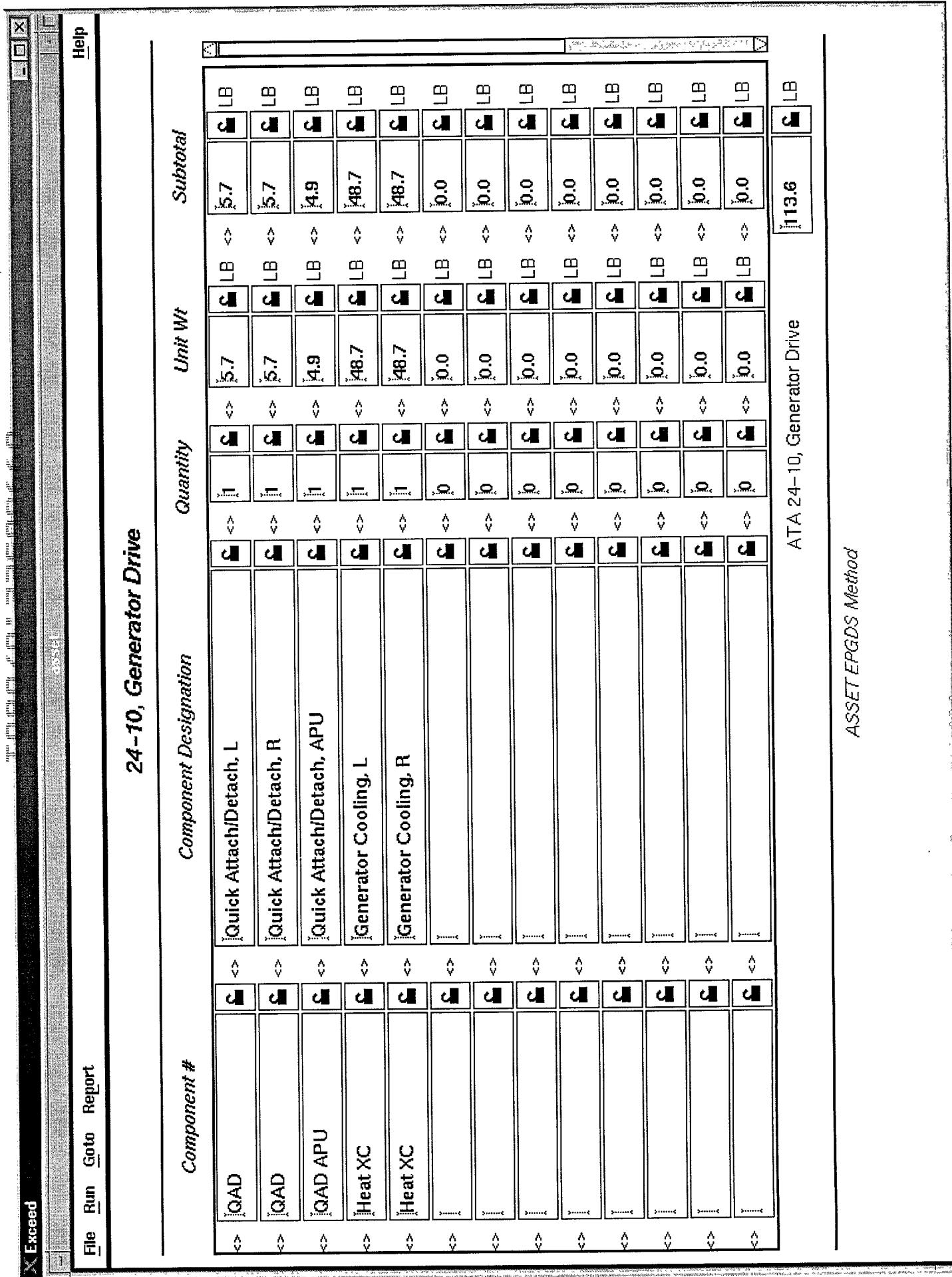
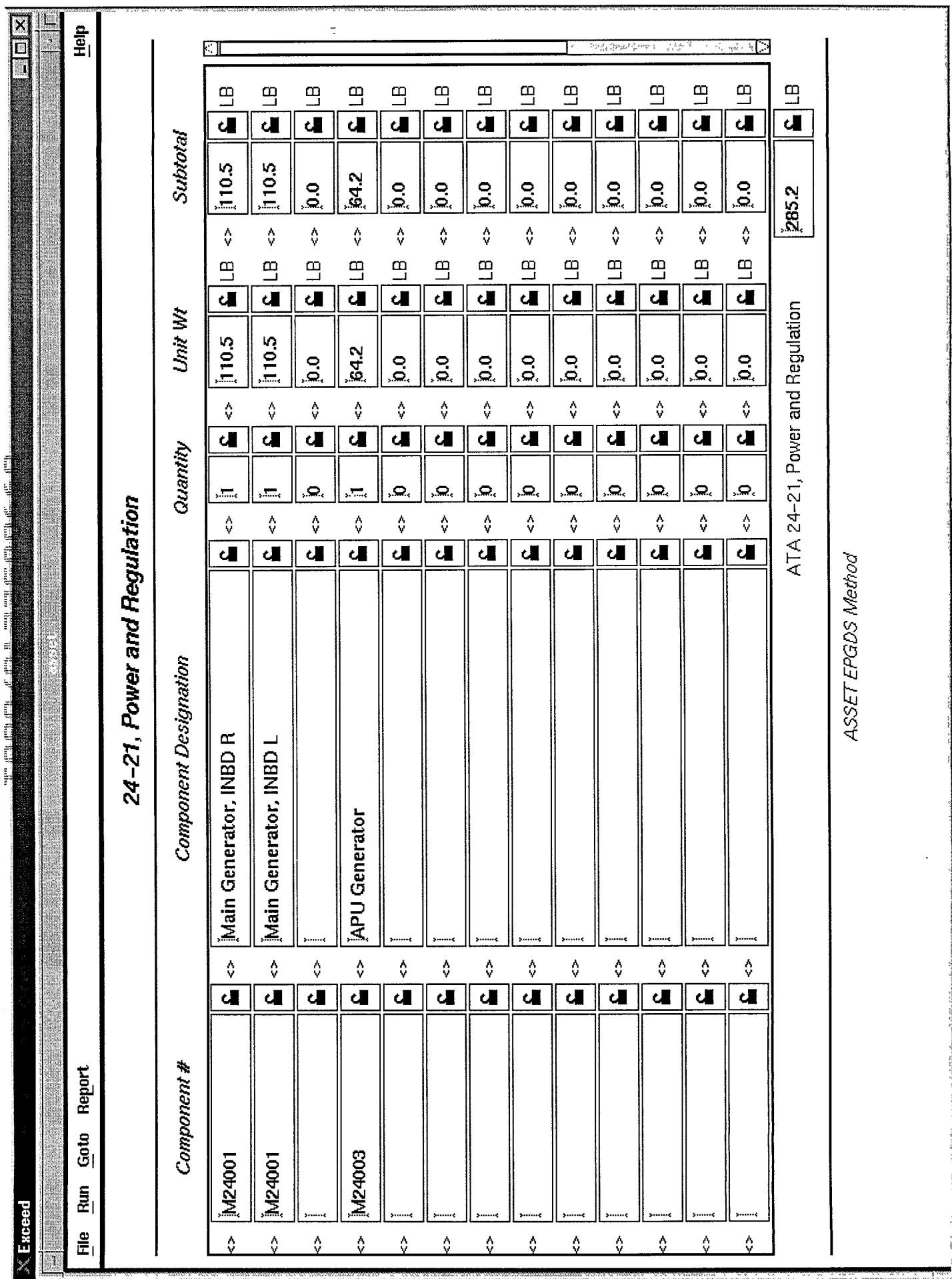


Figure 57



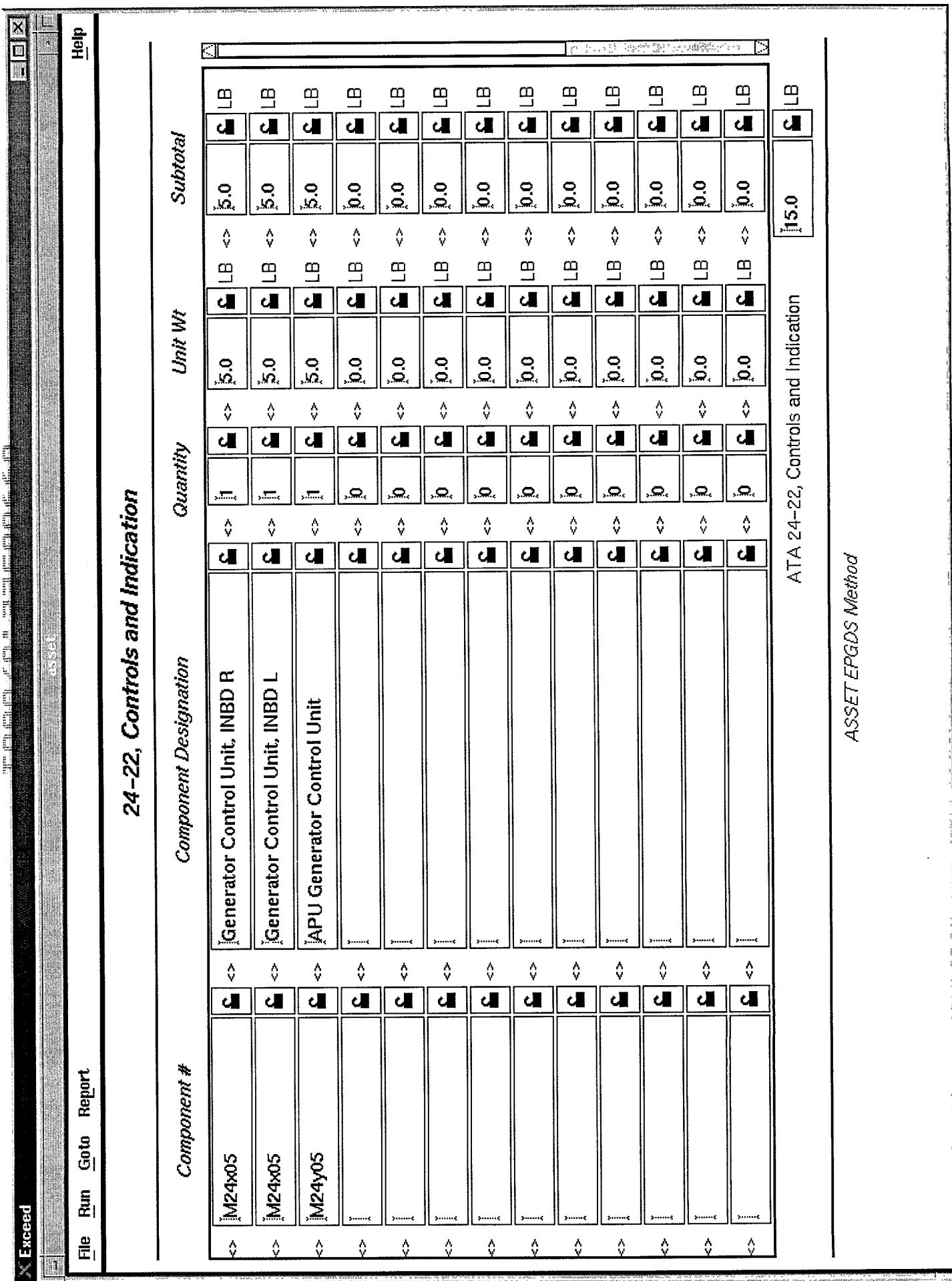
24-21, Power and Regulation

ASSET EPGDS Method

ATA 24-21, Power and Regulation

LB  
285.2

FIGURE 58



24-22, Controls and Indication

ATA 24-22, Controls and Indication

ASSET EPGOS Method

FIGURE 59

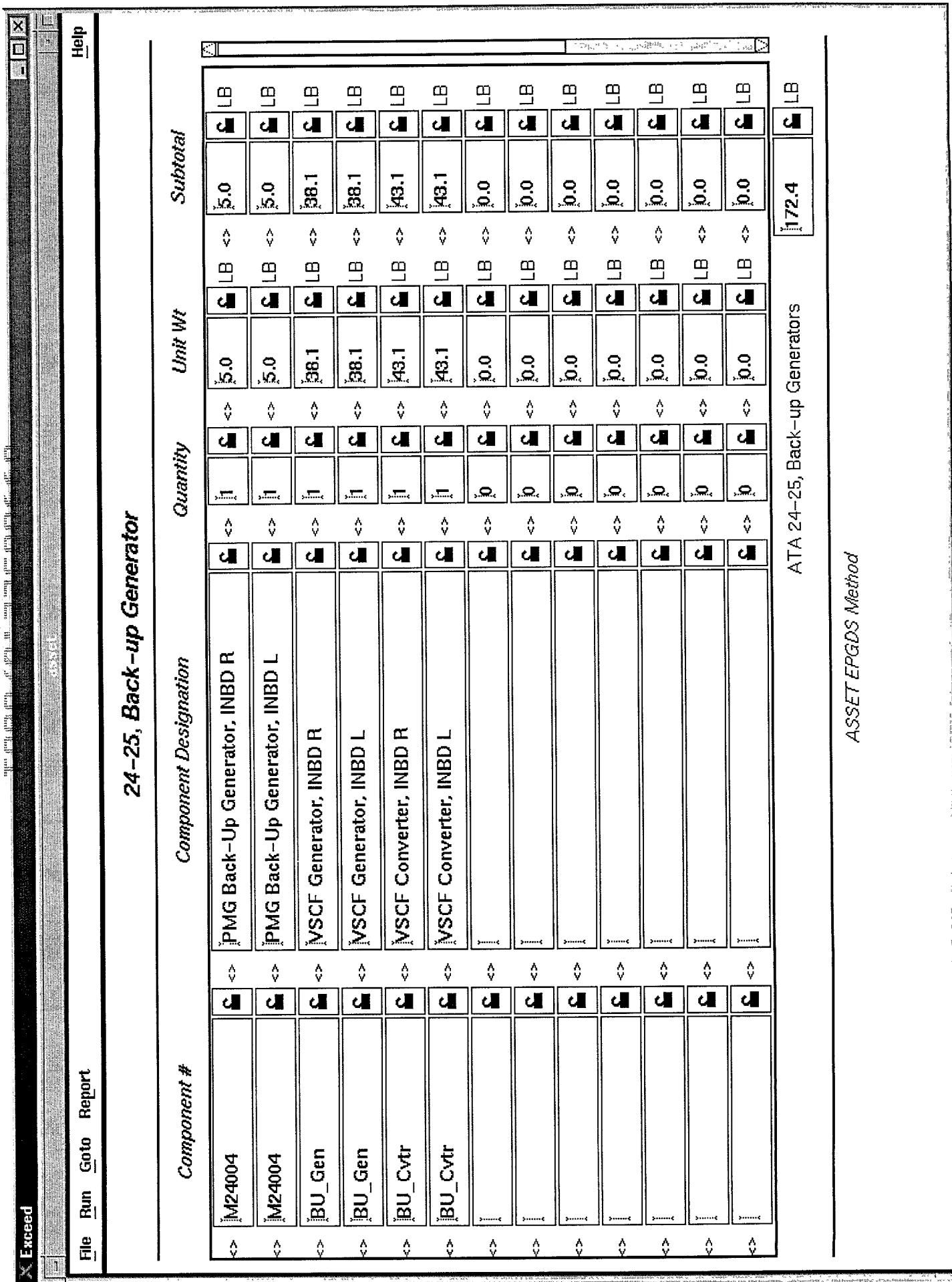


FIGURE CO

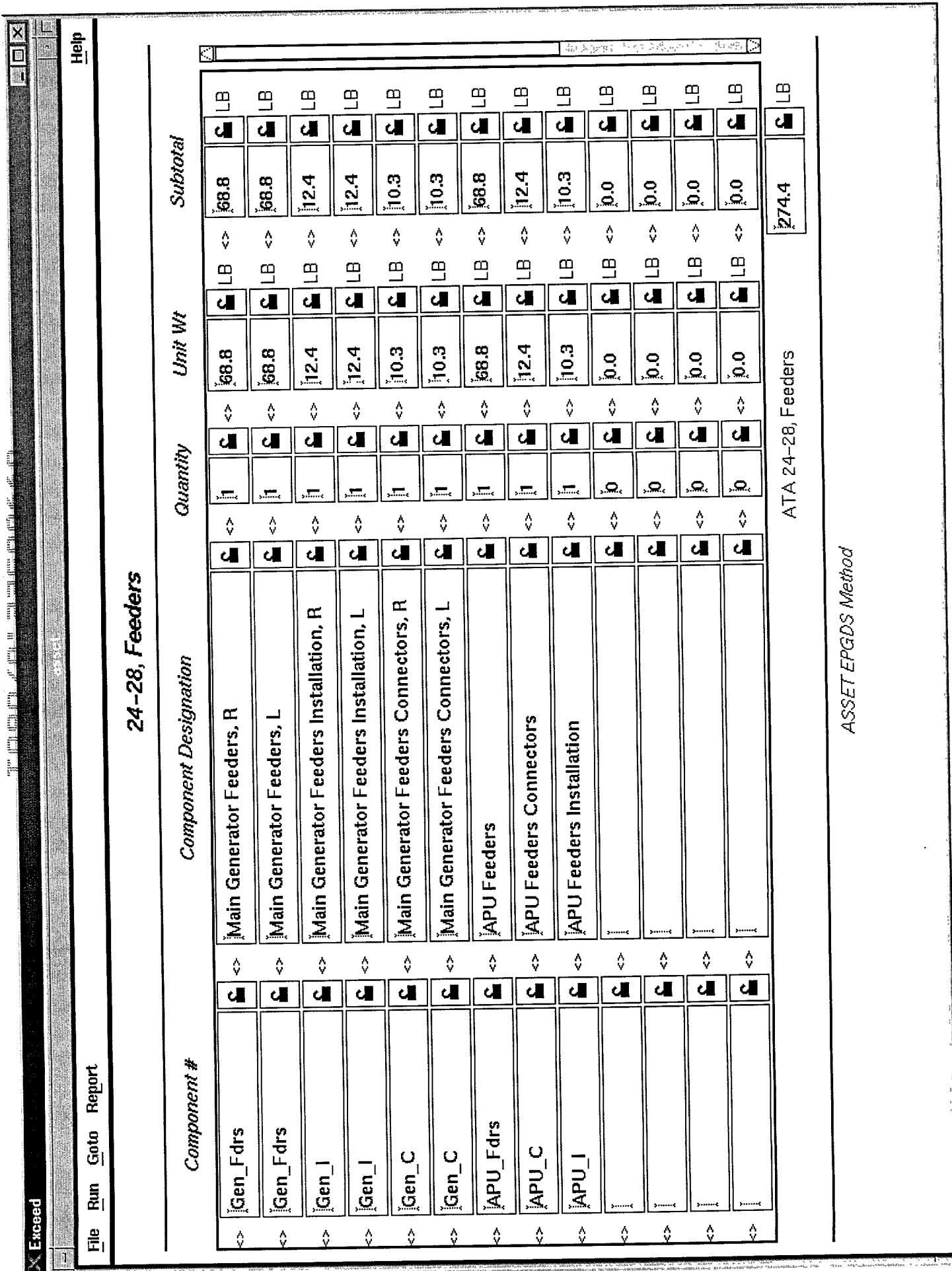


Figure 6)

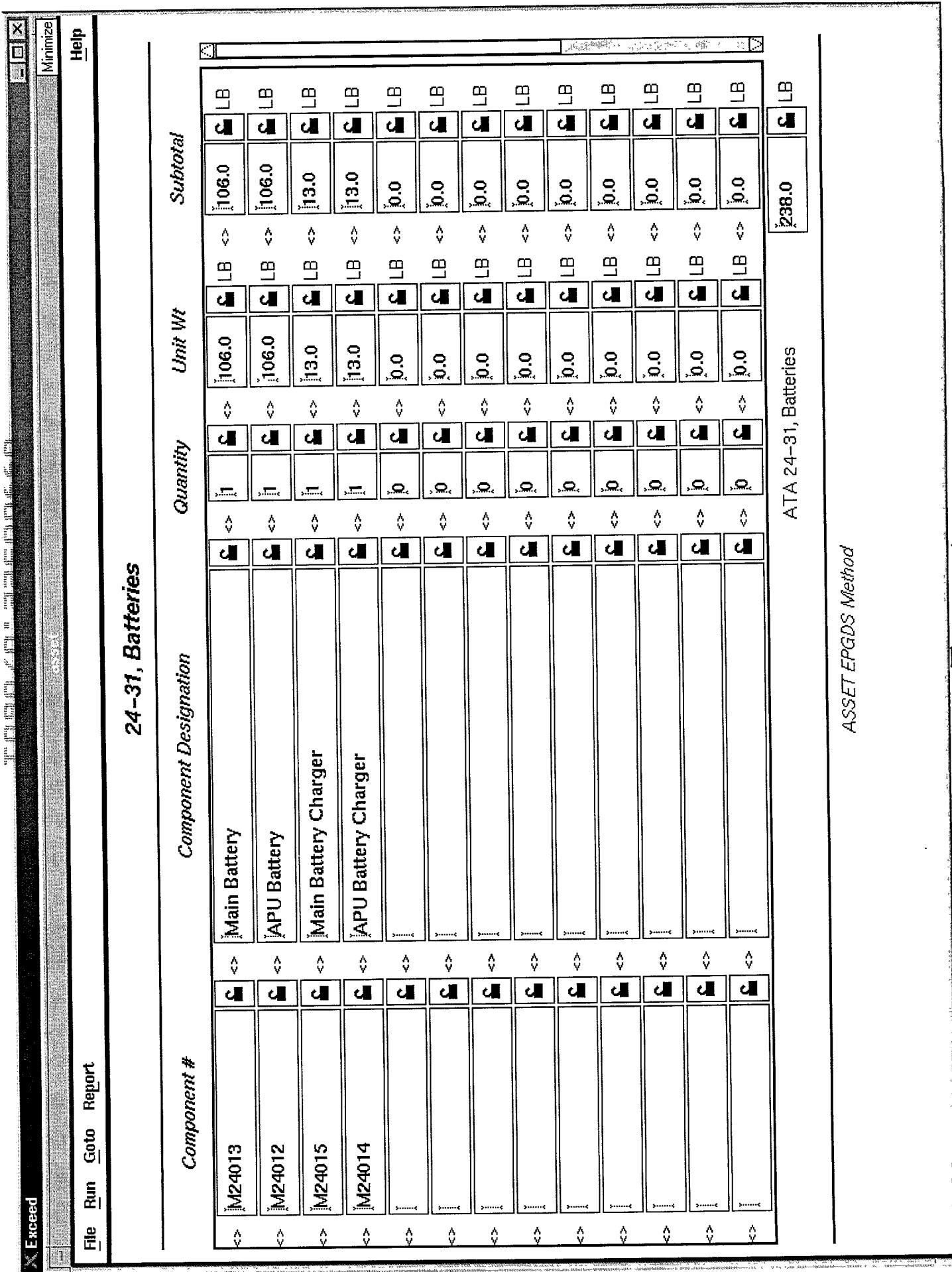


Figure 62

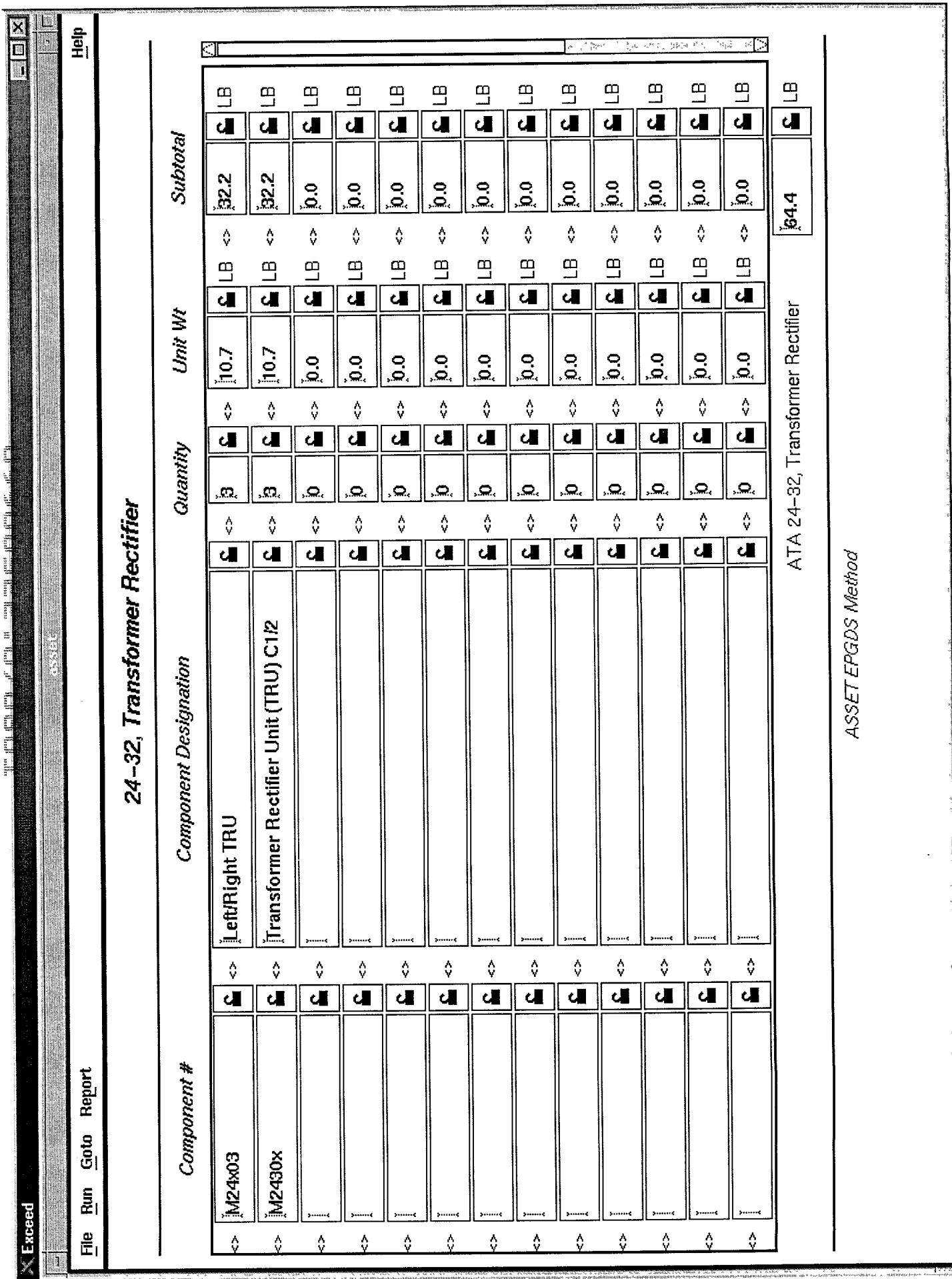
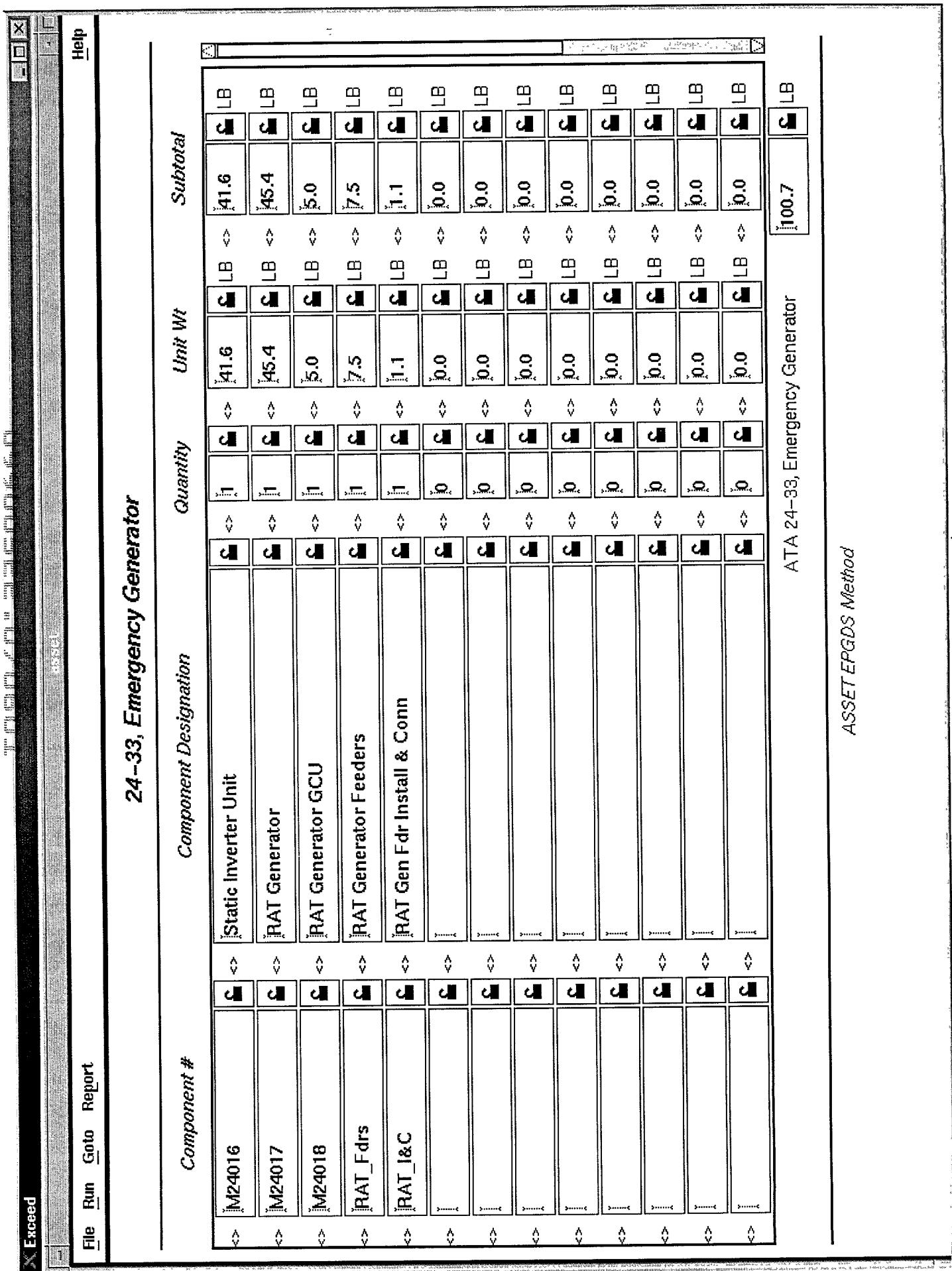


FIGURE 63



24-33, Emergency Generator

三

File Run Goto Report

ATA 24-33, Emergency Generator

ASSET EPGDS Method

Signature 64

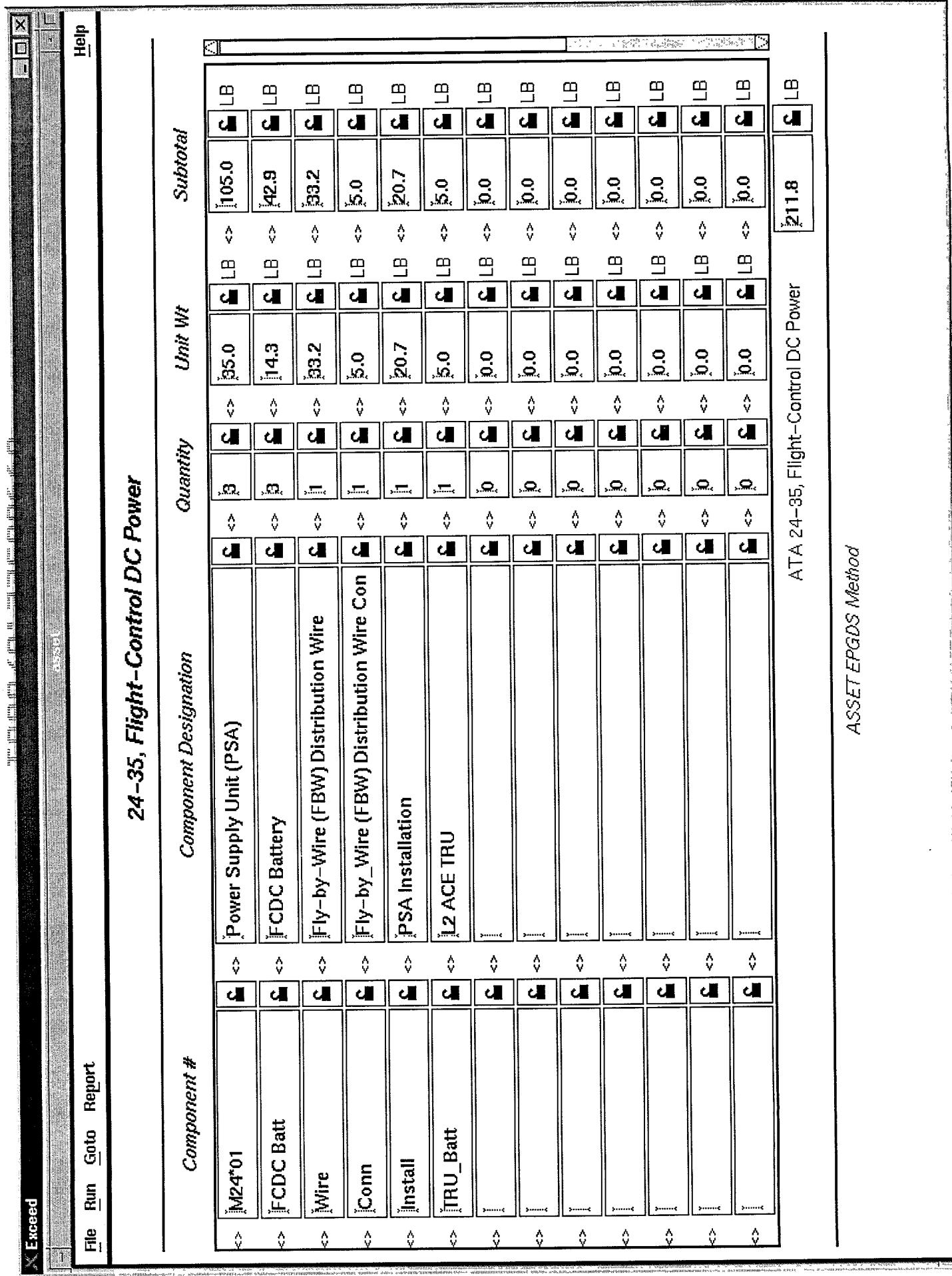


FIGURE 65

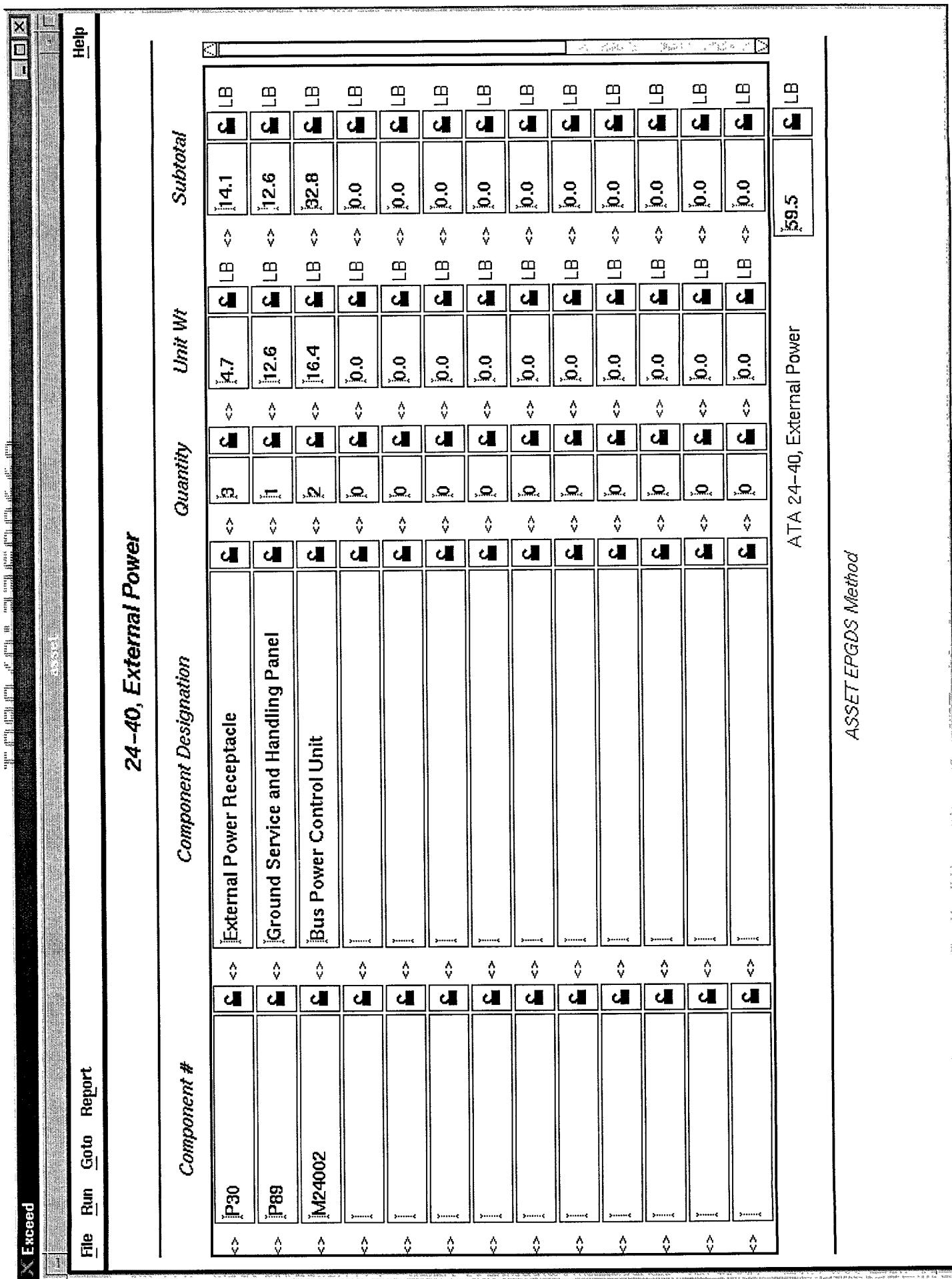


Figure 6b

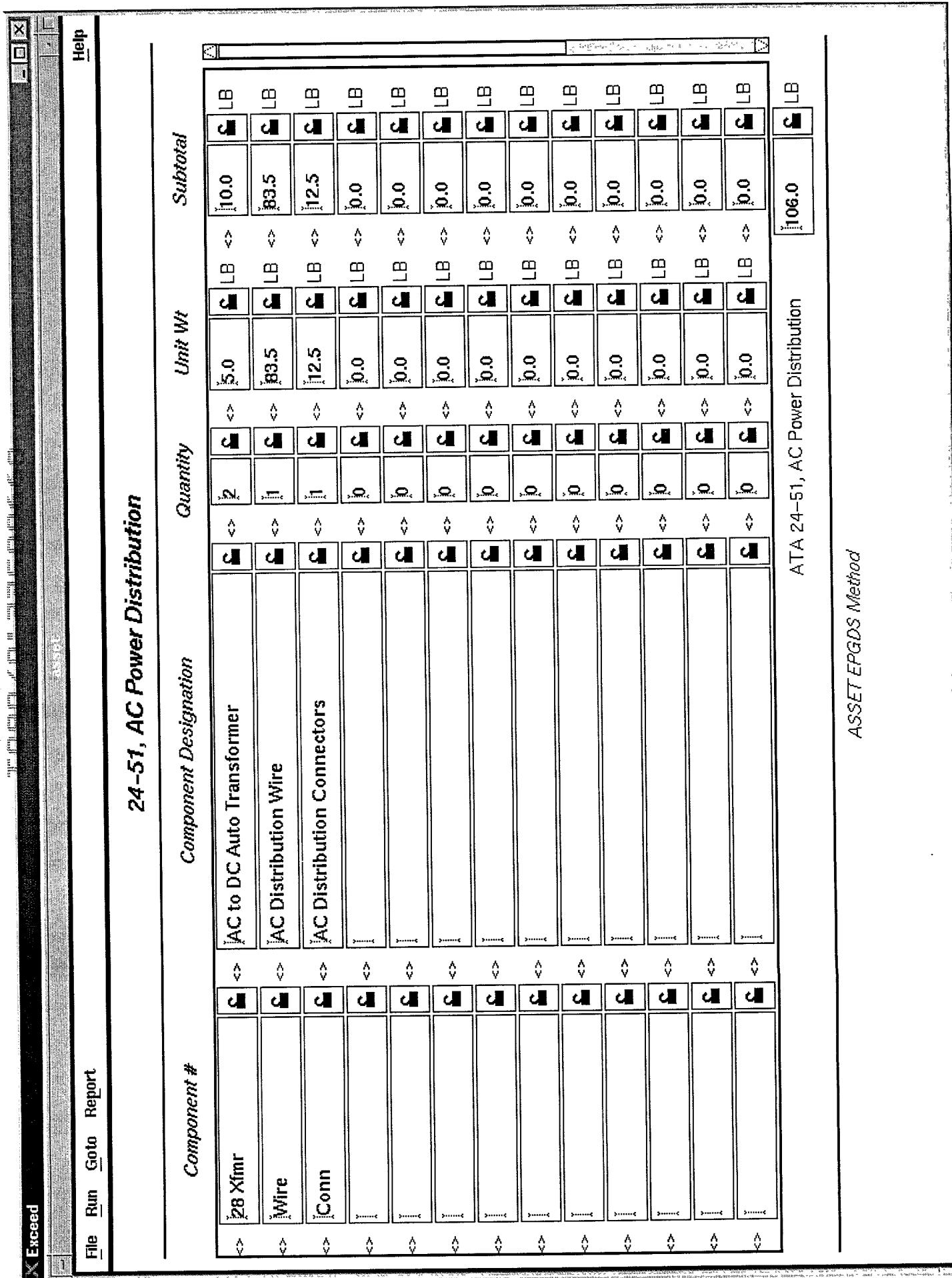
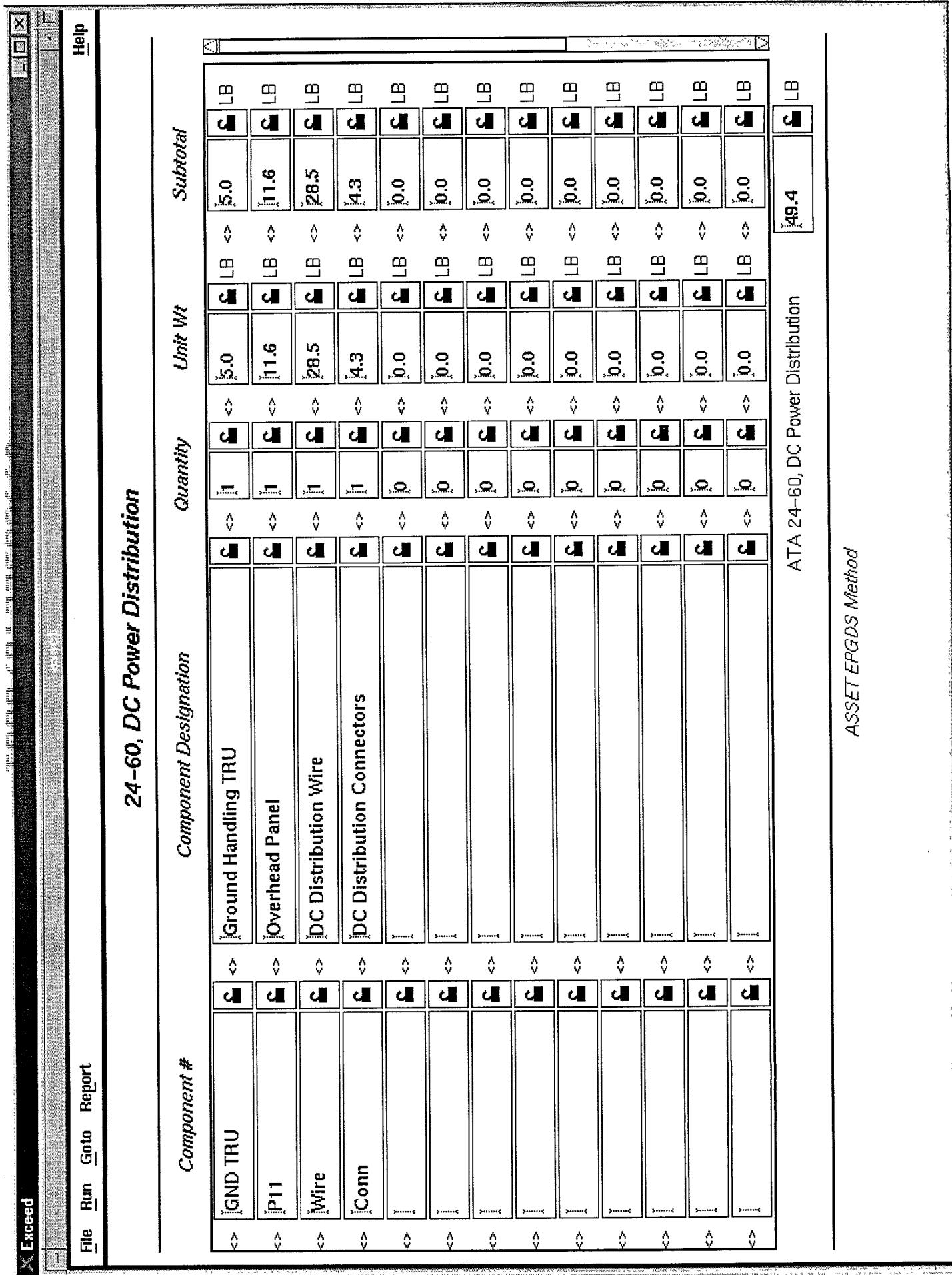


Figure 67



## FIGURE 68

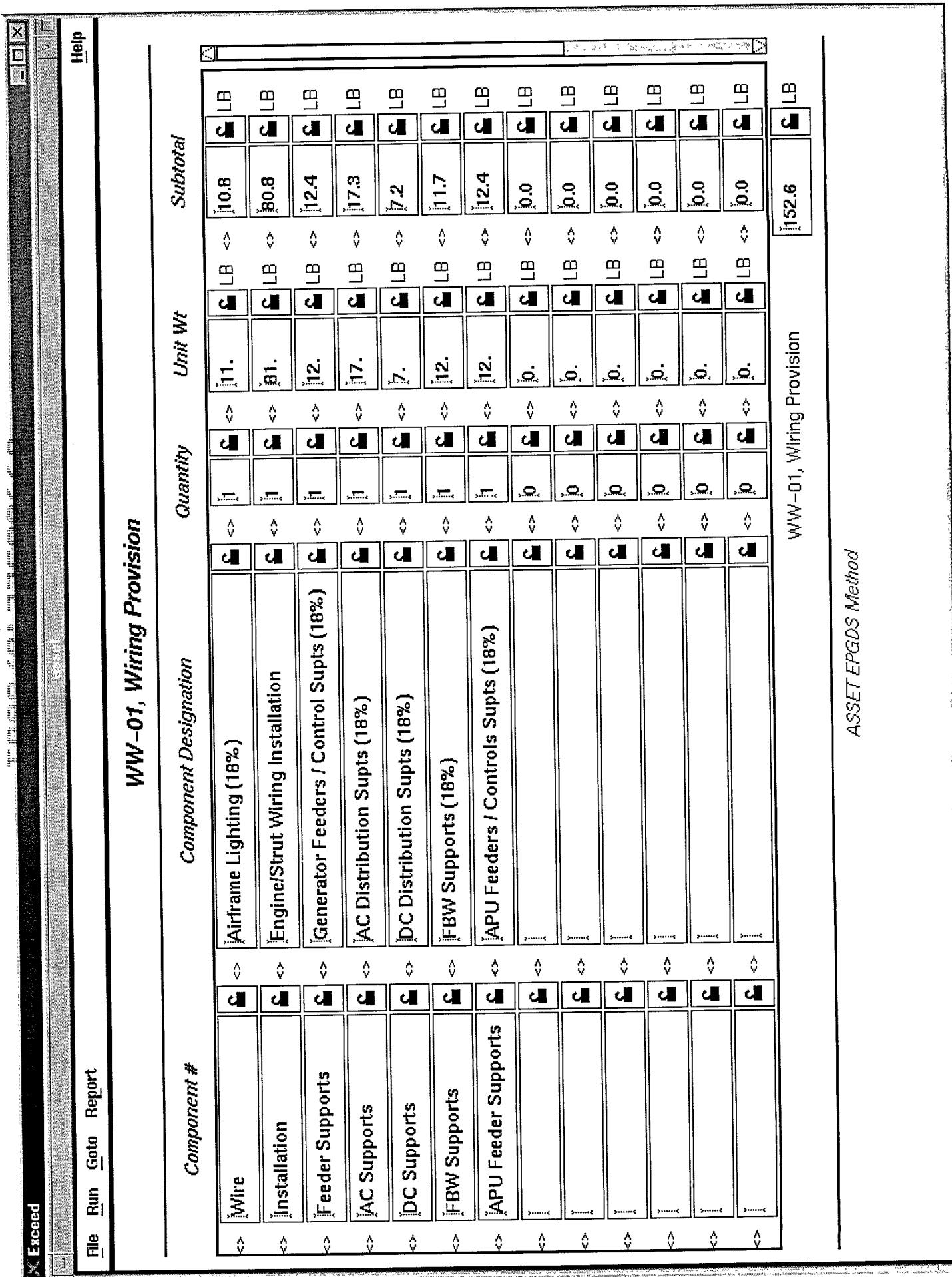
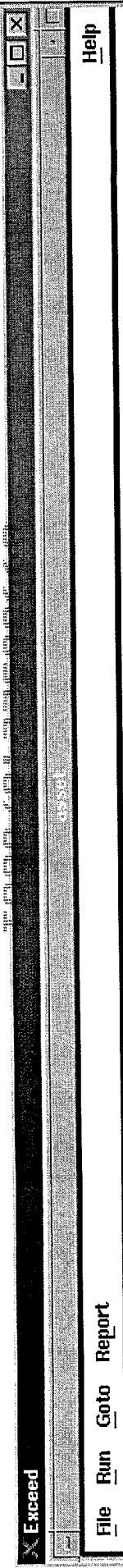


FIGURE 69



### ATA Chapter 24 Weight Totals

ASSET EPGDS Method

**Airplane Parameters**

File Run Goto Report Next Previous Back

Airplane Parameters	on
NACELLE	△ Height
EPGDS	△ Configuration
Leading Edge	△ Loads
Floor Beam	△ Architecture
Refused takeoff	△ Generation
Stage Noise	△ Distribution
System Attributes	△ System Attributes
db delta	ATA 24 Weight Summary □
AP acoustic level	FC 32 Weight Summary □
Max GW / Eng	Below Wing Weight □
Max total thrust / Eng	FC 32-01, AC Power System □
Thrust / GW ratio	FC 32-02, DC Power System □
Airplane Type	FC 32-03, Airframe Lighting □
Number of Passengers	FC 32-04, Electrical Equipment and Supports □
Range	FC 32-05, Indication & Misc. Elec Systems □

FC 32-06, Cargo Panels □

FC 32-07, Pur Pl - WTB Assy/Hldg Tank □

FC 32-08, Elec Load Mgmt Sys (ELMS) □

FC 32-10, Electrical Sys. Ctrl/Indication □

FC 32-23, ARINC 629-Cardfiles, BPCU, GCU, FSCF, ELMS □

FC 32-92, Eng/Strut Wiring Instl/Airplane □

FC 32-95, HIRF Protection - Electrical □

FC 32-97, EBU Wire Bundle Assemblies □

ASSETT Main Module

FIGURE 71

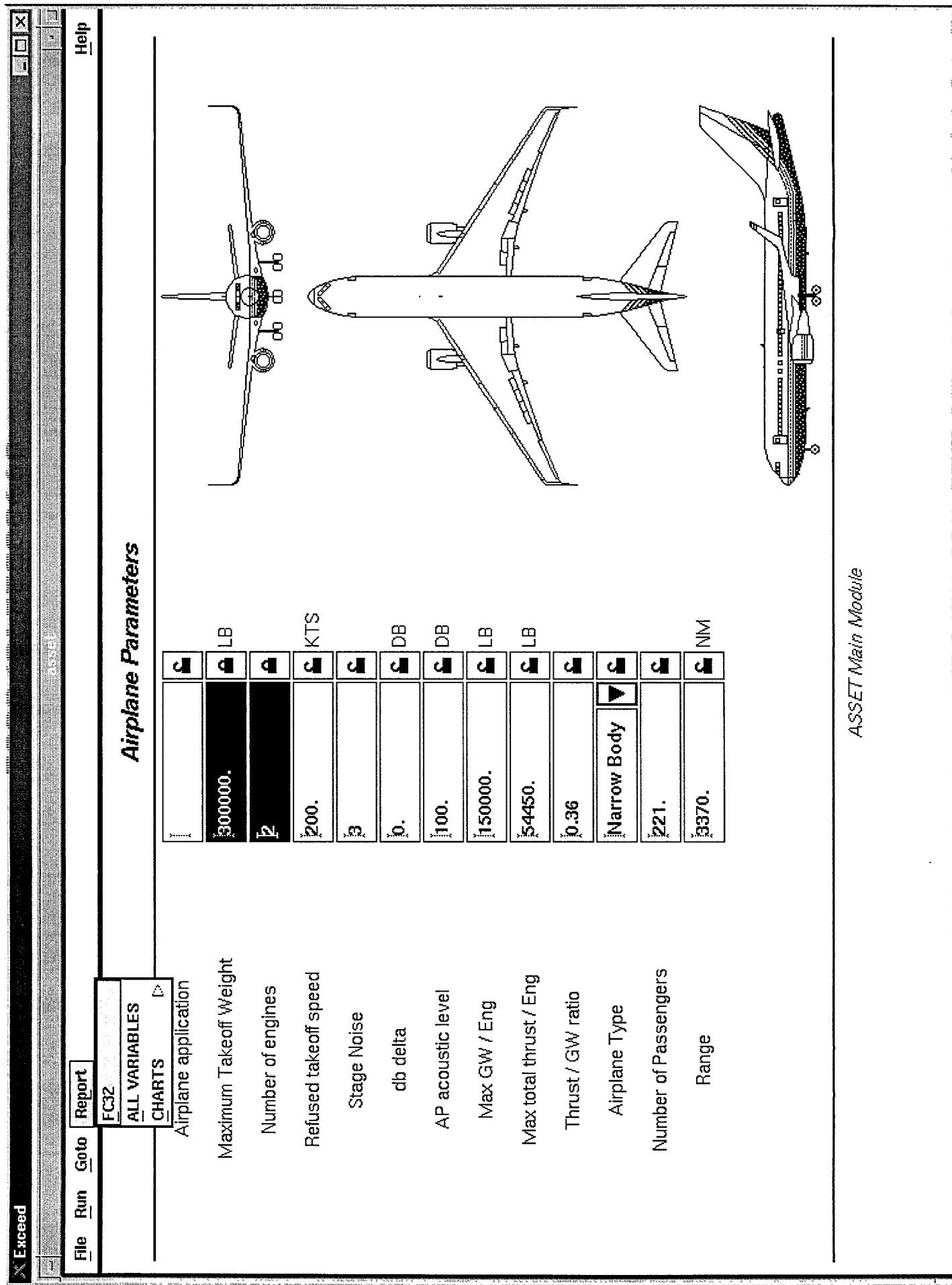


FIGURE 72

**Airplane Parameters**

File Run Goto Report Help

Airplane application  S

Maximum Takeoff Weight  300000.

FC 32 Report

Component #	Component Designation	Qty	Unit	Wt	Su
Electrical Power Generation & Distribution System					
32-01	AC Power System	1		255.3	
32-01-01	AC POWER GENERATION EQUIPMENT	1		233.9	
32-01-01-01	MAIN AC POWER GENERATORS INSTLD	2		90.0	
32-01-01-01-01	PRIME DRIVE GENERATOR	2		4.8	
32-01-01-01-02	QUICK ATTACH DETACH (QAD)	2		13.8	
32-01-01-01-03	GENERATOR FLUIDS	2		4.7	
32-01-01-01-05	HARDWARE INSTALLATION	2		3.6	
32-01-01-01-06	WIRING INSTALLATION	1		5.0	
32-01-01-02	GENERATOR CONTROL UNITS	1		16.4	
32-01-01-06	BUS POWER CONTROL UNITS	1		269.6	
32-01-05	EROPS-VSCF POWER GENERATION SYSTEM	1		95.9	
32-01-05-01	VSCF GENERATORS & OIL	2		38.1	
32-01-05-01-01	VSCF GENERATOR	2		9.9	
32-01-05-01-02	VSCF GENERATOR OIL	1			

save to file

send to printer

Return

Exceed

asset

ASSET Main Module

Figure 13

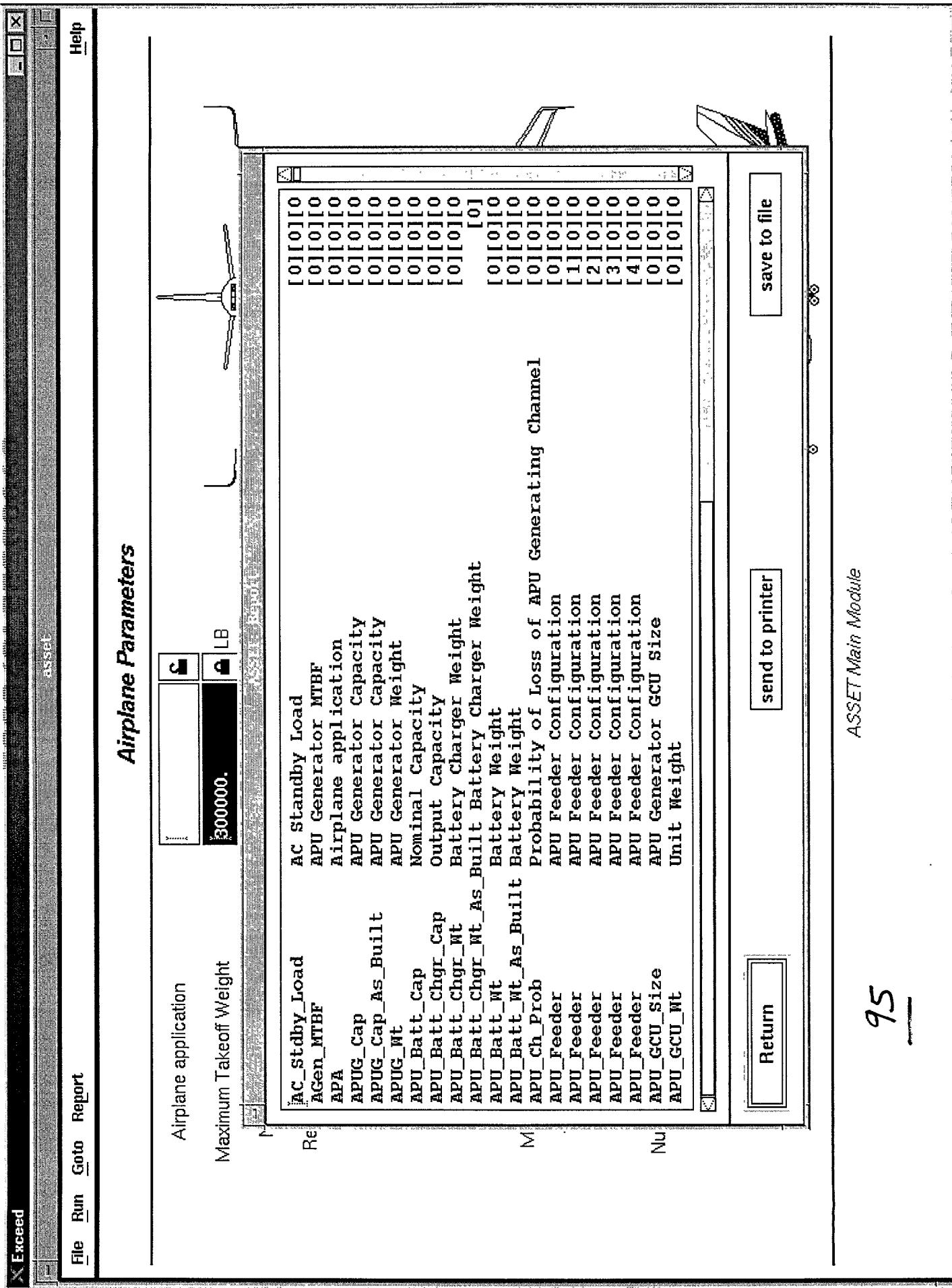


FIGURE 74

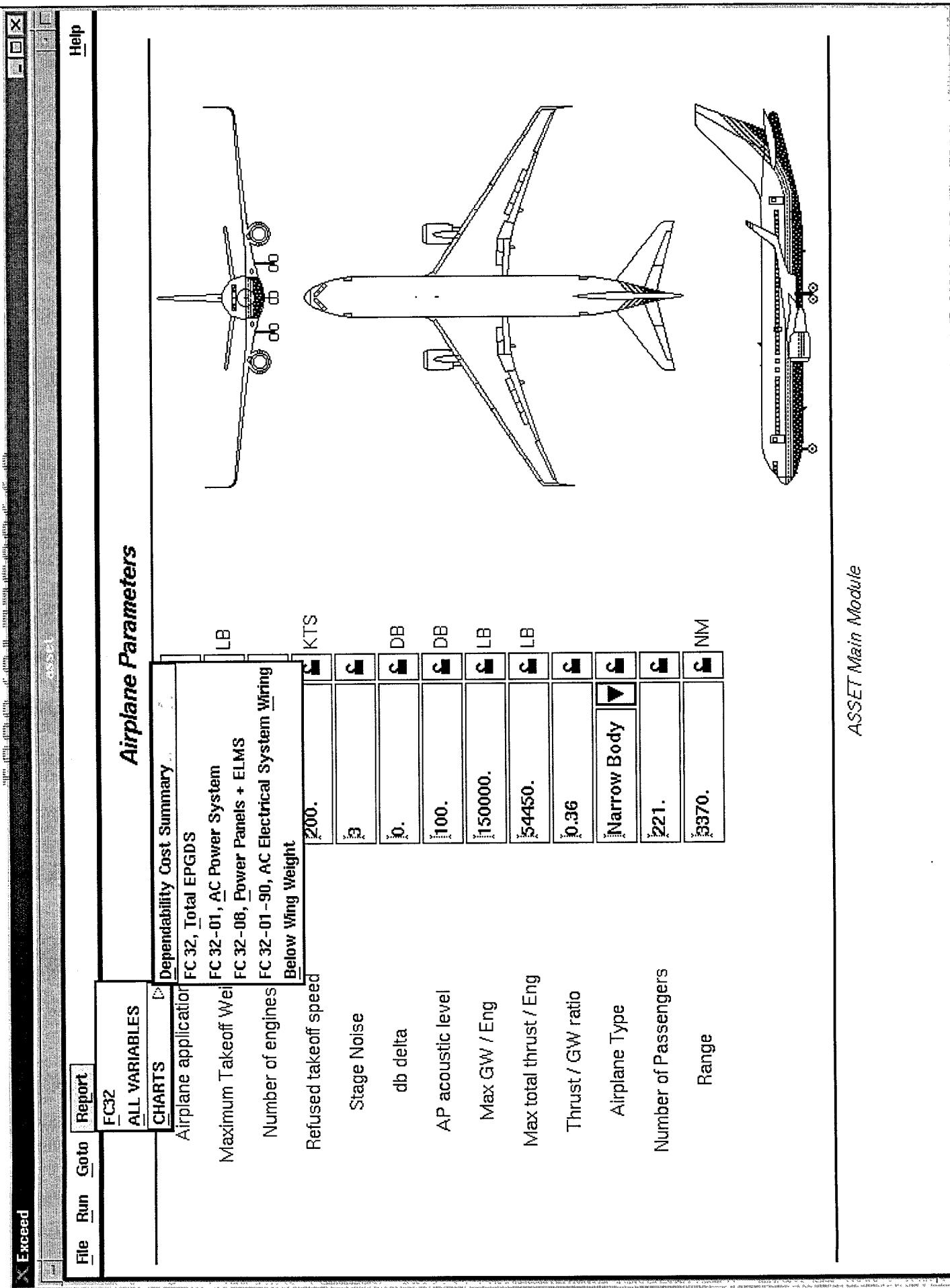


Figure 7.5

ASSET Main Module

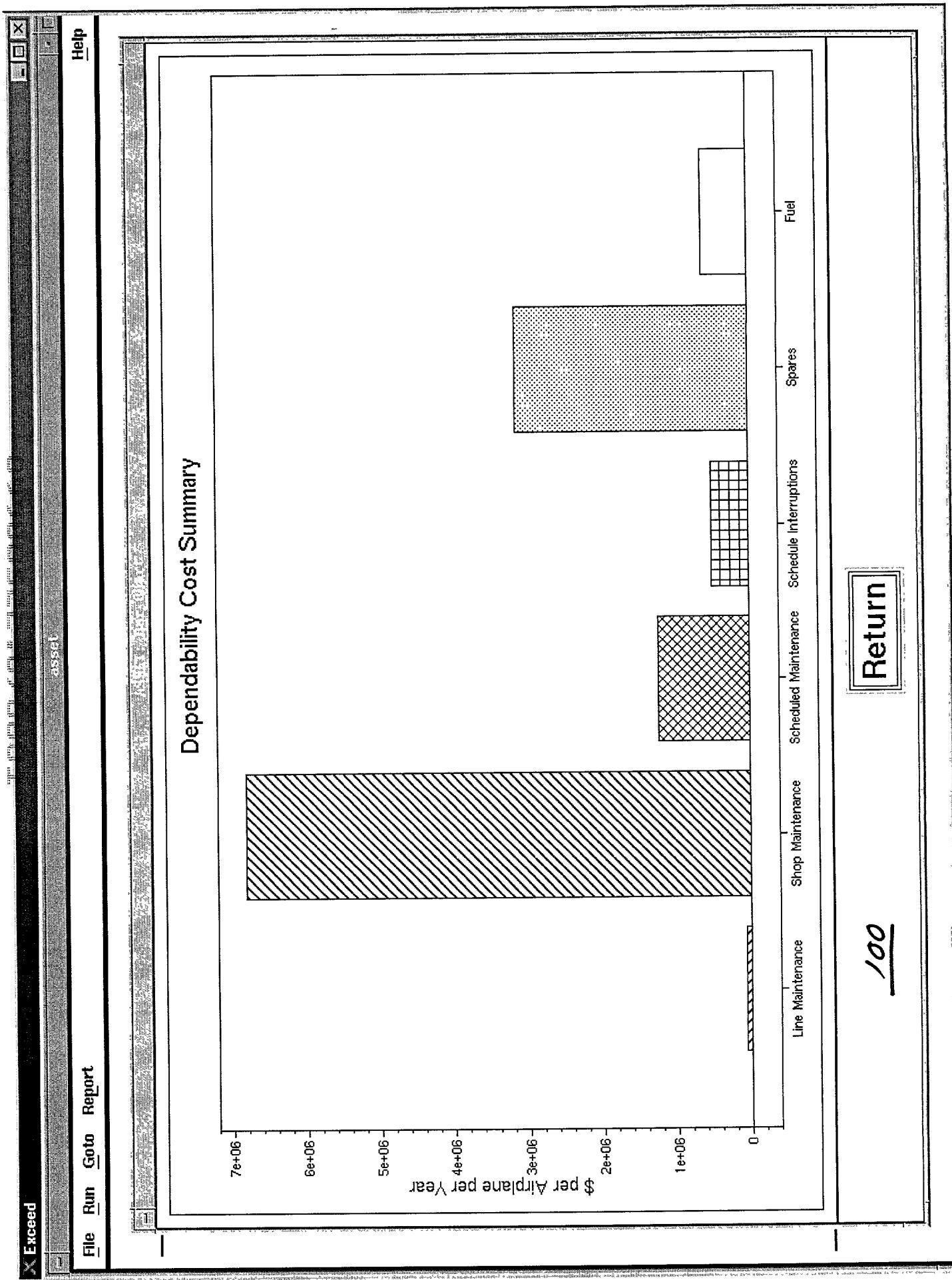
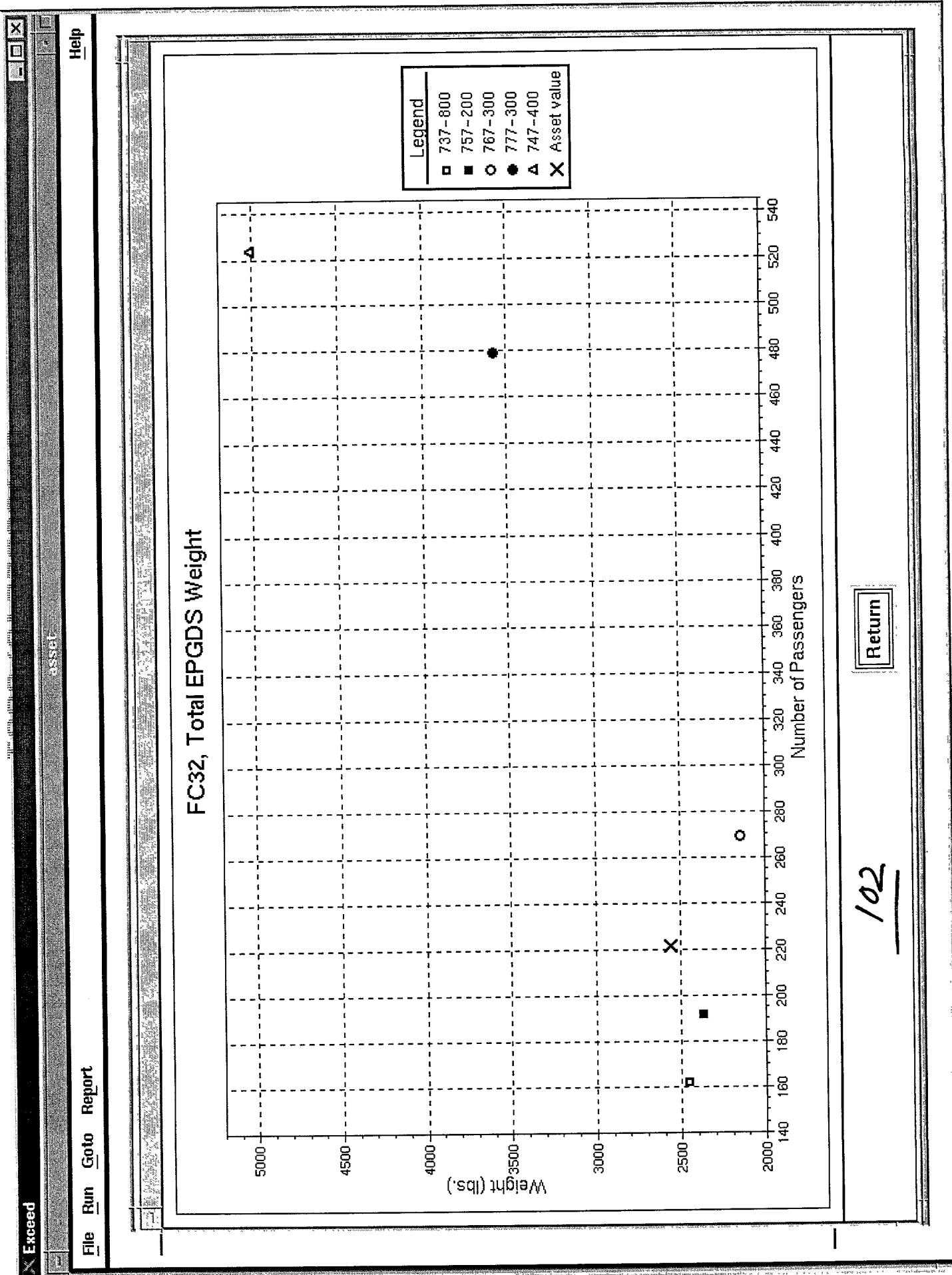


Figure 7c



102

Return

FIGURE 77

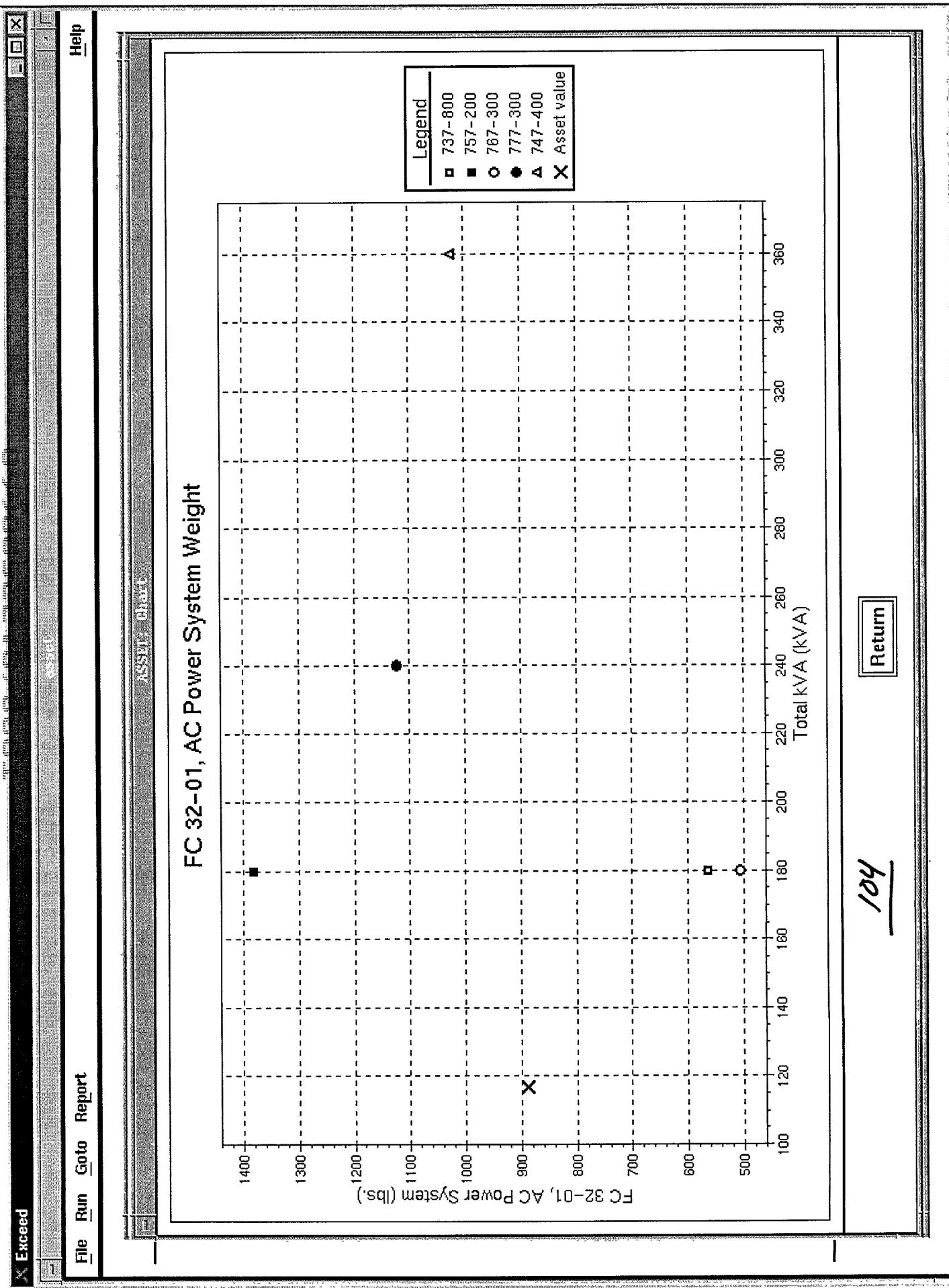


Figure 78

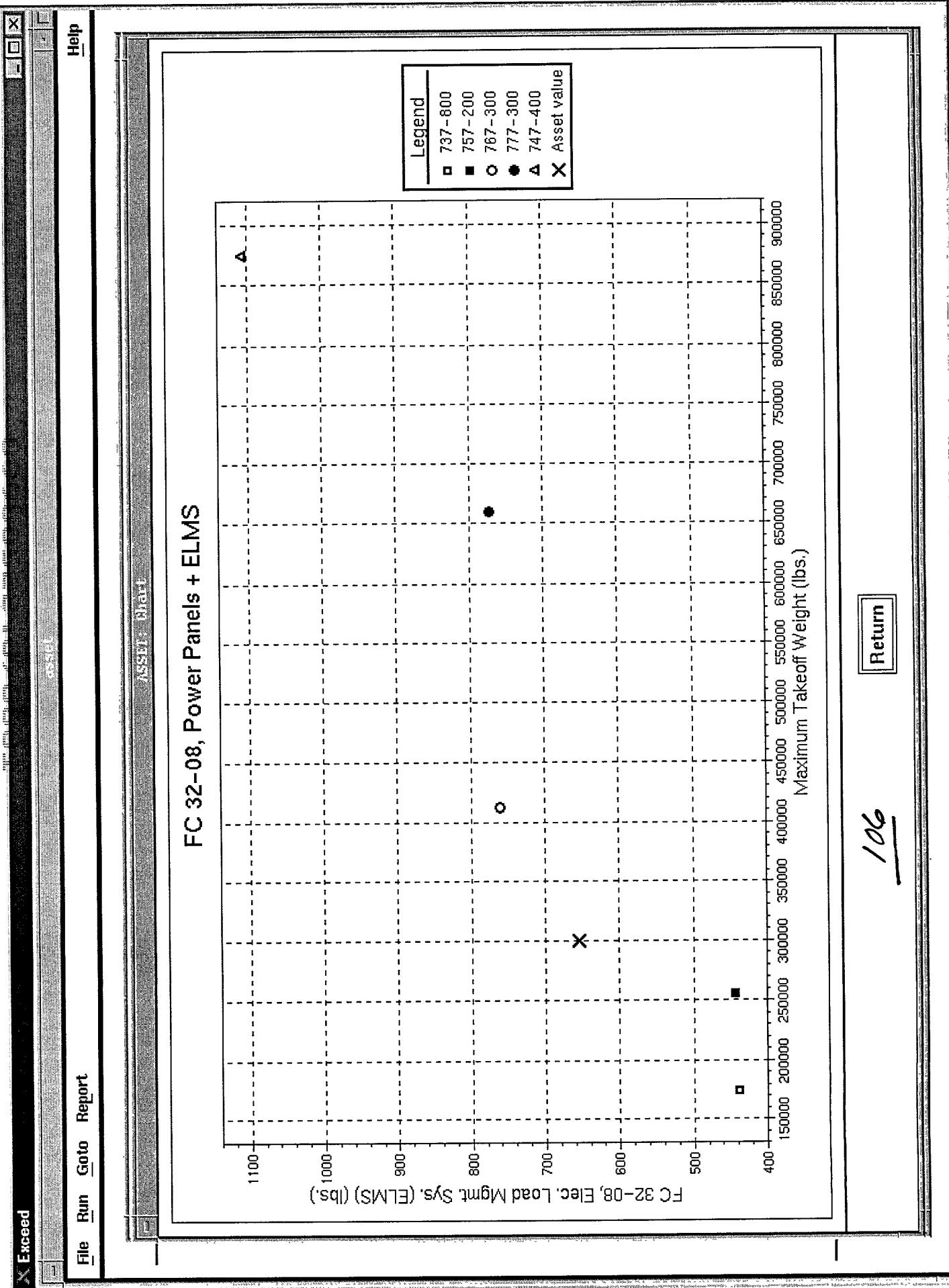
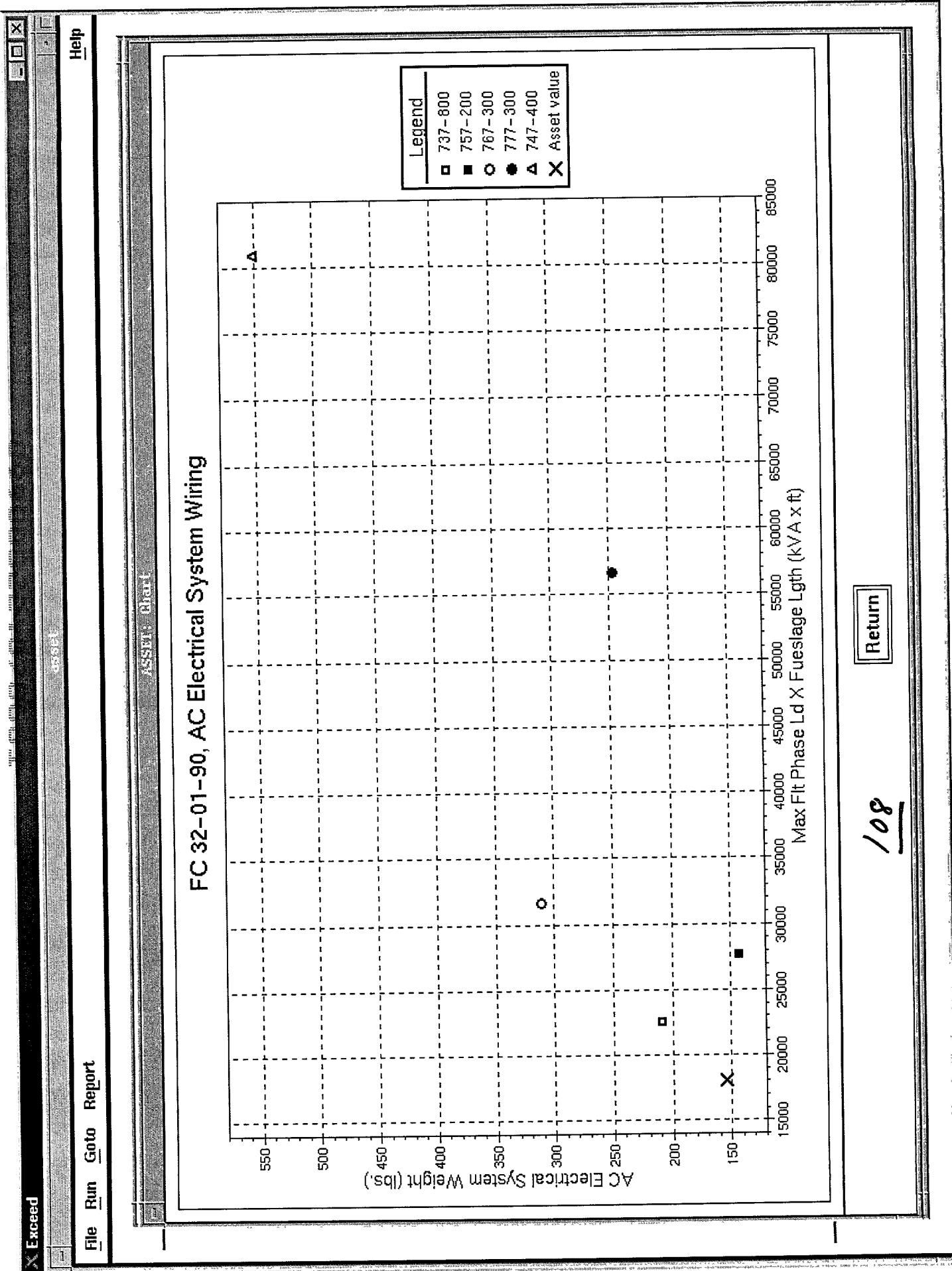


Figure 7)



108

[Return](#)

*FIGURE 80*

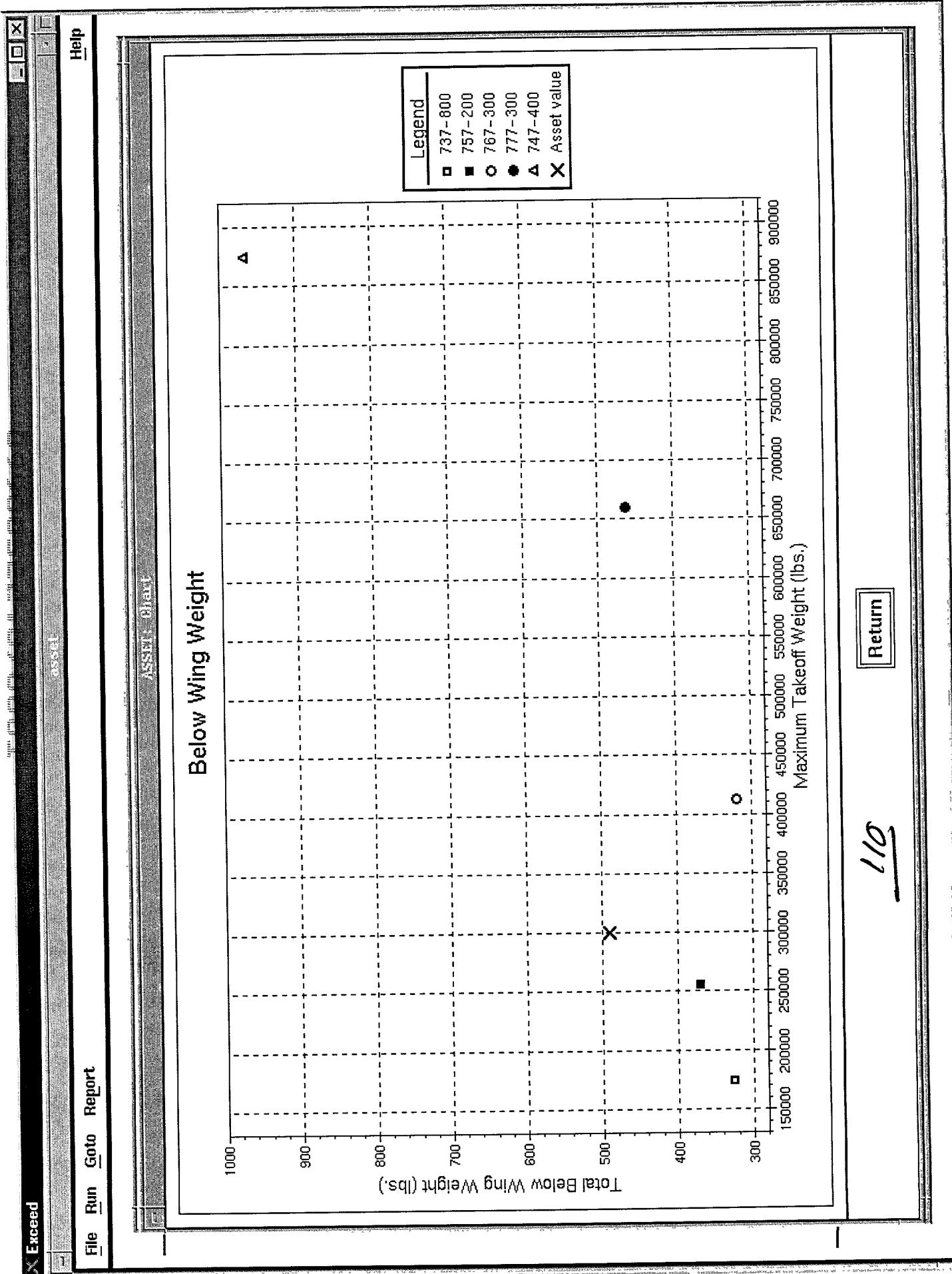


Figure 81